INSTRUCTION MANUAL

Stand-Alone 16Channel

DIGITAL VIDEO RECORDER

MODEL HDV043, HDV045

Ver. 010313

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Preface

This manual contains user instructions on how to operate the Digital Video Recording devices (DVR Unit), Remote Controller, Client Application, Mobile Application and Central Monitoring Software Application. This manual also contains cautions and notifications regarding safe operating parameters to protect the equipment and equipment operator. Please read this manual and comply with its suggested guidelines for proper operation of this equipment. For any other concerns or questions, please inform your vendor for further information.

About This Guide

This guide is comprised of a Table of Contents where you will find Chapters divided logically discussing particular topics. It is further divided by sections that discuss more detailed information pertaining to certain features of the Chapter topics. This manual also includes an Index section where popular subjects or key concepts are referenced by page numbers. What this manual does not cover are topics about upgrades and repairing the physical unit. These should be done through your vendors authorized repair center or by detailed direction from your vendor. Upgrades and repairs consists of adding and removing Hard Disk Drive, adding and removing a media drive, upgrade or downgrade the Firmware, replace any electronic components inside the physical units. These actions should be under the guidance of a qualified technician because improper actions may cause permanent damage to the unit. Some drives also have compatibility constraints and they are constantly being updated as new products emerge from drive manufacturers.

IMPORTANT Information About HIGH DEFINITION SERIAL DIGITAL INTERFACE Digital Video Recorders. PLEASE READ!!!!

High Definition Serial Digital Interface (HD-SDI) Digital Video Recorders are capable of providing Full HD (1920x1080 Pixel Resolution) video through a new signaling method.

Cameras

HD-SDI cameras must be used with this DVR to provide Full HD video. Connecting a lower resolution camera (ex. 600 TV Lines) to this HD-SDI DVR may result in poor and or distorted video/image quality.

Accessories (Video Baluns, Video Distribution Amp, Couplers, Connectors, Lenses, Cables etc…)

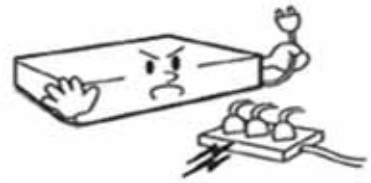
If you will be installing this unit, make sure that all accessories used are rated for HD-SDI DVR's and cameras. Failure to use HD-SDI qualified accessories and cables may result in unstable system performance.

For more information about HD-SDI technology, please visit our website at http://www.cloverusa.com
You can also visit the HDCCTV Alliance ™ website at http://www.highdefcctv.org for more information.

Note of Caution – Before You Start!

Warning

Check if the power is switched off before installation or additional repair. Never plug in while the device is in operation. Otherwise it might be set on fire or put you at the risk of fire, electrocution and damage.



Keep the cables at least 15 centimeters away from the wall and at least five centimeters away from the side so that the cables, including power line and video cable, may not be disfigured. Otherwise it might put you at the risk of fire, electrocution and damage.

Never uplift the cover, break down, repair and maintain at your disposal. Otherwise it might put you at the risk of fire, electrocution and damage.

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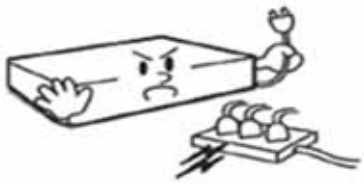
Keep the device environment always clean before and after installation of the device. Use dry cloth to clean the device. Never use any organic solvent. Otherwise it might be the cause of electrocution or mechanic disorder.

Input voltage of the device should come within the range of 10 percent of specified voltage. Use separate wall power to keep heating appliances, including hair dryer, iron and refrigerator. Otherwise it might be the cause of fire and electrocution.



When strange noise or smell is sensed, immediately plug out and send inquiry to service center or seller.

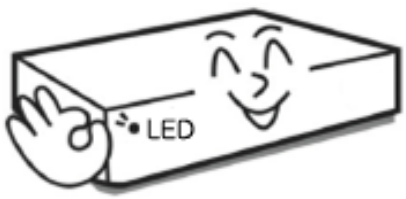
Do not install device in humid place filled with dust. It might be the cause of electrocution and fire.

Caution

Do not install the device in any place where strong magnetic flow, electric wavelength and vibration may be sensed or where radio, TV or other wireless device is located. Keep the device away from magnetic flow, electric wave or vibration.

Strong shockwave or vibration may be the cause of mechanic disorder. Please be careful.

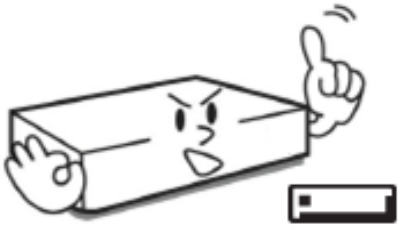
Check if power switch and record on the front side of the product is still turned on.



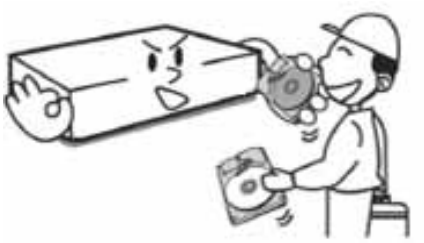
Do not put anything heavy on the product. Otherwise it may be the cause of disorder.

Be careful so that anything conductive may not fall into the ventilation hole. Otherwise it may be the cause of disorder.

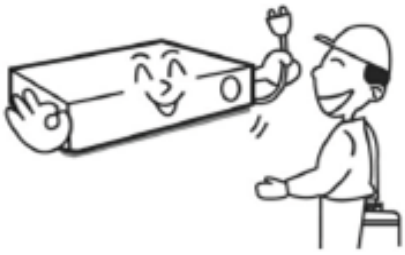
When HDD is overloaded,you change the setting to keep recording. In that case, check if it would be OK to eliminate the saved data.



When HDD saving data gets old enough, video data to be saved may suffer so much damage that it may be irreparable. If screen appears broken while regenerating data saved in HDD, it means HDD won't work any longer. Immediately contact service center to replace them.



When any abnormal sign is detected, immediately contact seller or service center.

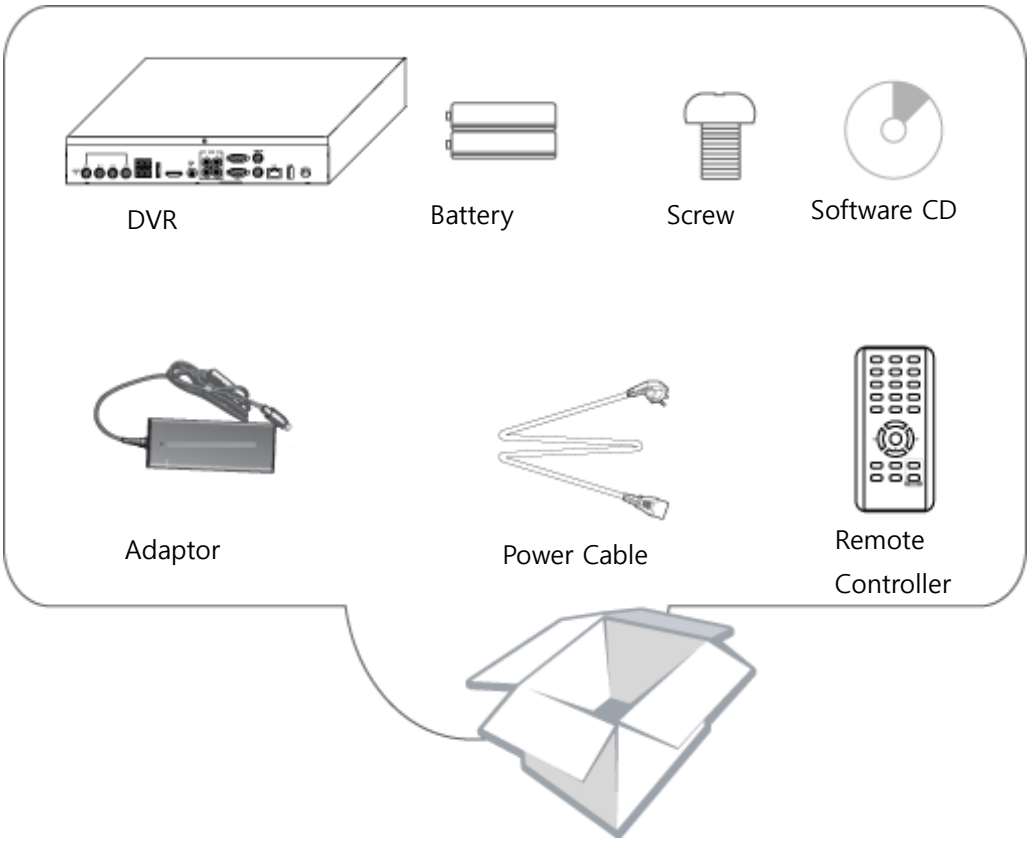


Caution : Any changes or modifications in construction of this device which are not expressly Approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note : This Equipment has been tested and found to comply with the limits for a Class A digital A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning : This is a class A product. In a domestic environment this product may cause radio Interference in which case the user may be required to take adequate measures.

Check Components



Components	
DVR	Stand Alone Digital Video Recorder
Battery	1.5V (AAA) 2 pcs.
Screw	For HDD mounting
Software CD	Manual and Client program
Adapter	DC 12V 6.67A
Power Cable	Power cable
Remote Controller	For DVR operation

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Chapter 1. Features & Components

1-1. Features

The highly advanced and high-performance video recorder is designed to make it easier to install and use with safety.

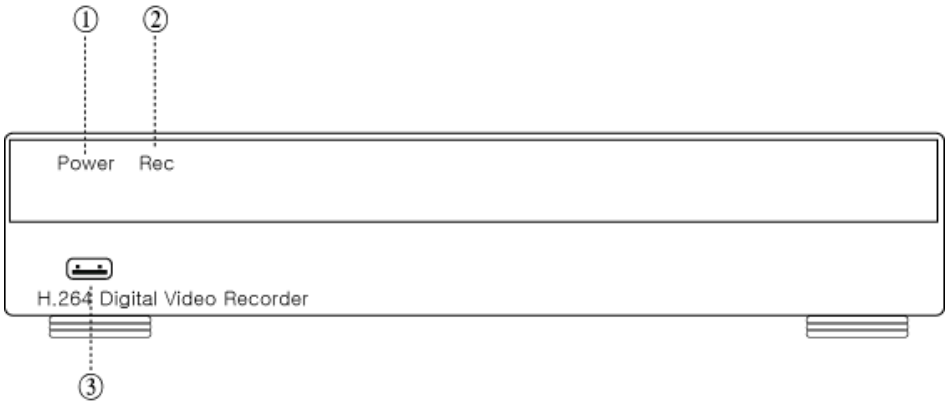
Main Feature

- Able to control the PTZ by using mouse like joystick
- Front USB port for easy backup
- Able to back up by ODD (optional)
- Support GIGA bit Ethernet.
- Able to access internet with dynamic IP address
- Support Dual-Stream network transmission.
- Able to output simultaneously thru TV, VGA, S-VHS, Spot
- Able to set the resolution, frame and quality per channel.
- Support a number of PTZ protocol
- Support Central Monitoring Software (CMS).

Application Range

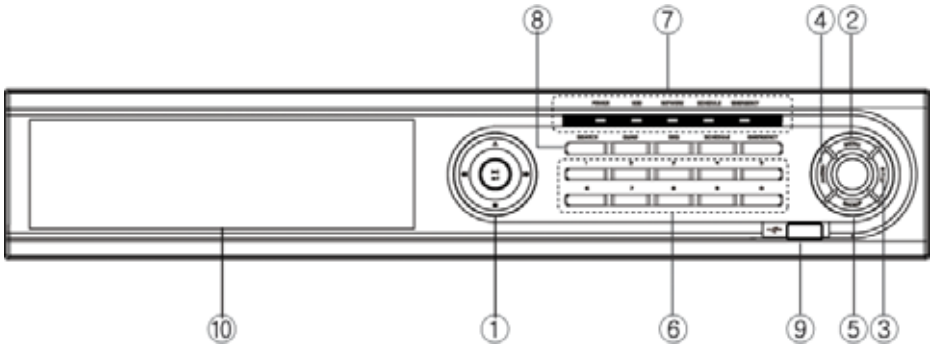
√ Banks, ATM machine, supermarket, convenience store and other places
√ Residential area, apartment buildings, jewelry store, commercial building
√ Places requiring safety for children such as school, elementary school and playground
√ Warehouse, storage house and workplace
√ Places requiring remote surveillance

1-2. Name and Function of Front Panel



(HDV043)

[1] POWER LED [2] RECORD LED [3] USB Port [4] MENU Button
[5] QUAD Button [6] REC Button (Emergency / Schedule)

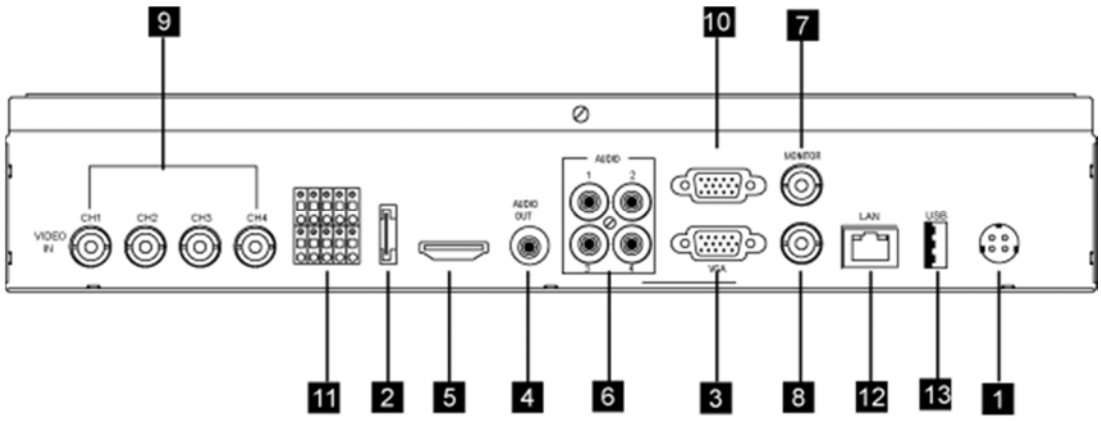


(HDV045)

No	Button/Function	Description
1	Direction Button / Playback Button	Use as a control button on Setup menu
		Speed control on playback, Stop button, Pause button.
2	Menu	Display a menu, Move to upper menu, Cancel a function
3	Pan/Tilt	Display Pan/Tilt menu
4	Audio	Display Audio listening menu
5	Backup	Display Backup function of video data
6	Number	Channel selection or number input
7	LED Status	Show status of Power, Recording, Remote Access, Schedule Recording and Emergency Recording

8	Function Button	Search	Display search menu
		Split Mode	Select split mode
		Sequence	Automatic screen shift
		Schedule Recording	Schedule recording
		Emergency Recording	Emergency Recording
9	Front USB Port	USB Connecting slot	
10	ODD	Available to connect ODD	

1-3. Rear Panel

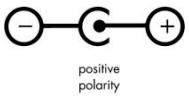


No	Button/Function	Description
1	Power	Power Input
2	External SATA Port	External storage and backup port
3	VGA	VGA Monitor Output
4	Audio Out	Audio Output
5	HDMI Out	HDMI Video output
6	Audio Input	Audio Input
7	Video output	CCTV Monitor Output
8	SPOT	SPOT Output
9	Video Input	Camera Video Input
10	Serial Port	RS-232 Port
11	Tx, Rx, Sensor, Alarm	Pan/Tilt(Tx, Rx), Keyboard(Tx, Rx), Sensor Input, Alarm Output
12	LAN Port	RJ-45 Ethernet Port
13	Rear USB port	USB Connection Slot

Rear Port Specification and Connection Examples

Power input

Input at 12 volt DC with positive polarity at 5 Amp



VGA (Video Graphics Array) Port

VGA port uses D-subminiature or D-sub, DE-15F (E rated sized D-Sub with 15 pin Female) port.

Connect a VGA monitor to the DVR with a standard VGA Cable. We recommend using a 17″ LCD or CRT monitor or above.

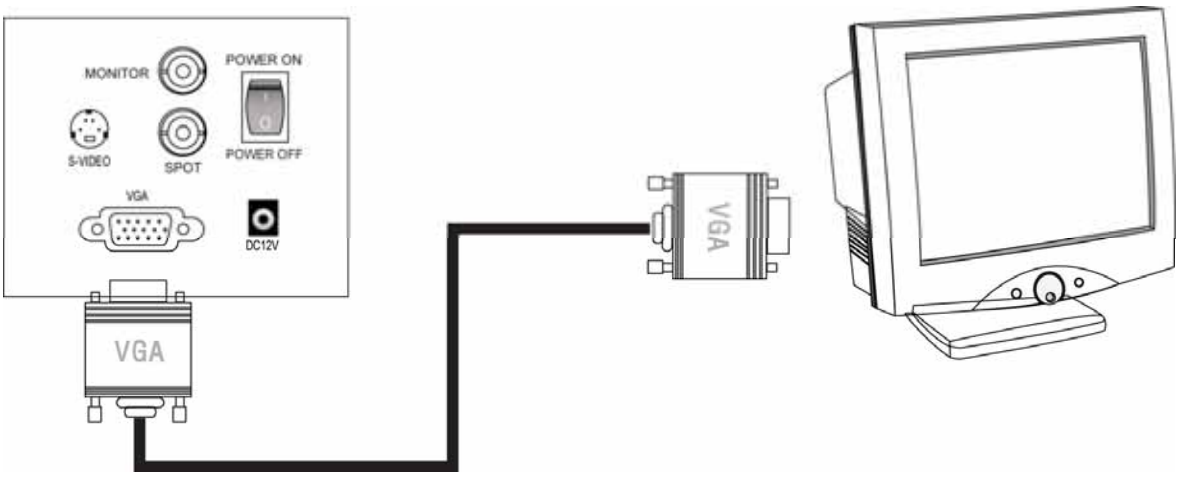


Figure 1 VGA Connection Configuration

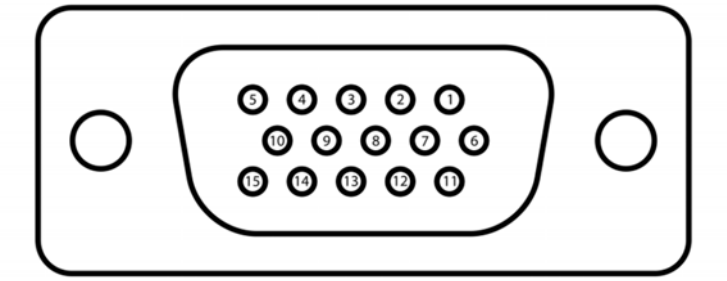


Figure 2. VGA Pin Configuration

VGA Pin Configuration Table

Signal Type	Pin Number	Description
RED	1	Red video (75 ohm, 0.7 V p-p)
GREEN	2	Green video (75 ohm, 0.7 V p-p)
BLUE	3	Blue video (75 ohm, 0.7 V p-p)
RES	4	Reserved
GND	5	Ground
RGND	6	Red ground (Red return)
GGND	7	Green ground (Green return)
BGND	8	Blue ground (Blue return)
KEY / PWR	9	Key (not used) / +5V DC
SGND	10	Sync ground
ID0	11	Monitor ID bit 0
SDA	12	Bidirectional data line
HSYNC or CSYNC	13	Horizontal or Composite Sync
VSYNC	14	Vertical Sync and data clock
SCL	15	Data clock

Table 3 VGA Pin Configuration

Main Monitor Output

Connect a monitor that supports BNC Inputs or use a "BNC Twist Lock" to Composite Video adapter if your monitor only supports Composite Video Inputs.

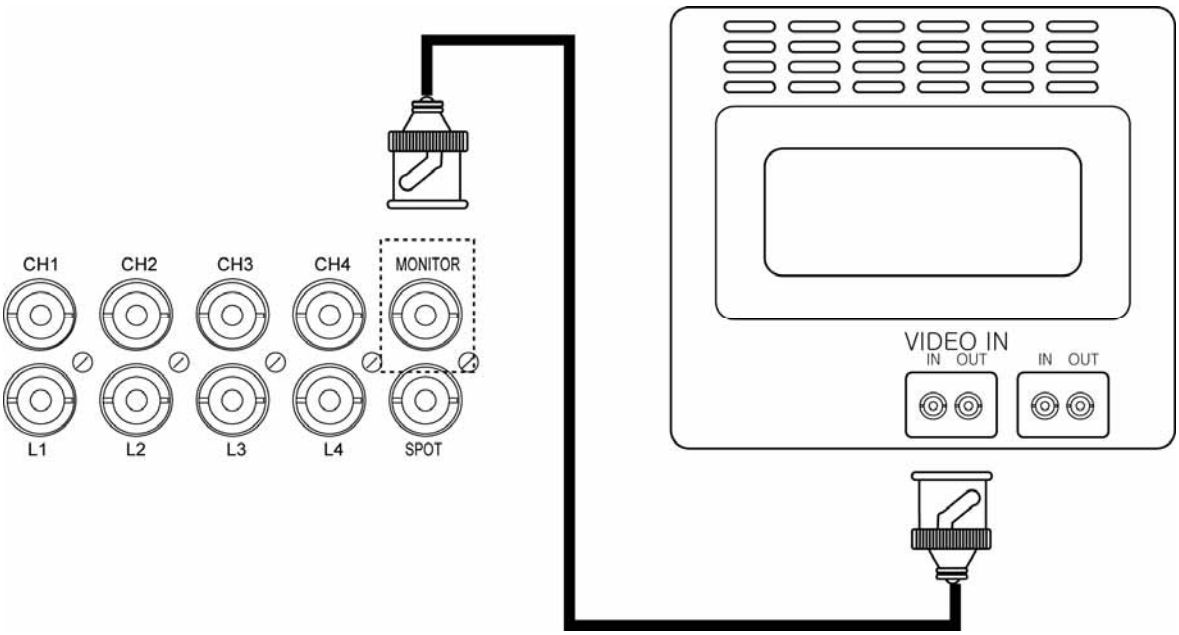


Figure 4 Main Monitor Connection

The display resolution for Monitor is at 720x480.

[Please refer to the **오류! 참조 원본을 찾을 수 없습니다.**, **오류! 참조 원본을 찾을 수 없습니다.**, **오류! 참조 원본을 찾을 수 없습니다.** item marked "⑦" Main Monitor Output].

SPOT Monitor Output

Connect a monitor that supports BNC Inputs or use a "BNC Twist Lock" to Composite Video.

The display resolution for Monitor is at 720x480.

Camera Input

The camera connections are the input ports for the video signal(s) used with the DVR. You may use any video source (75ohm) that outputs via a BNC connector (Twist Lock Type). If your video source outputs via RCA/Composite video, the proper adapter must be used when connecting the cable to the camera connection input port(s) of the DVR. Both NTSC and PAL signals are automatically detected by the DVR and requires no further configuration.

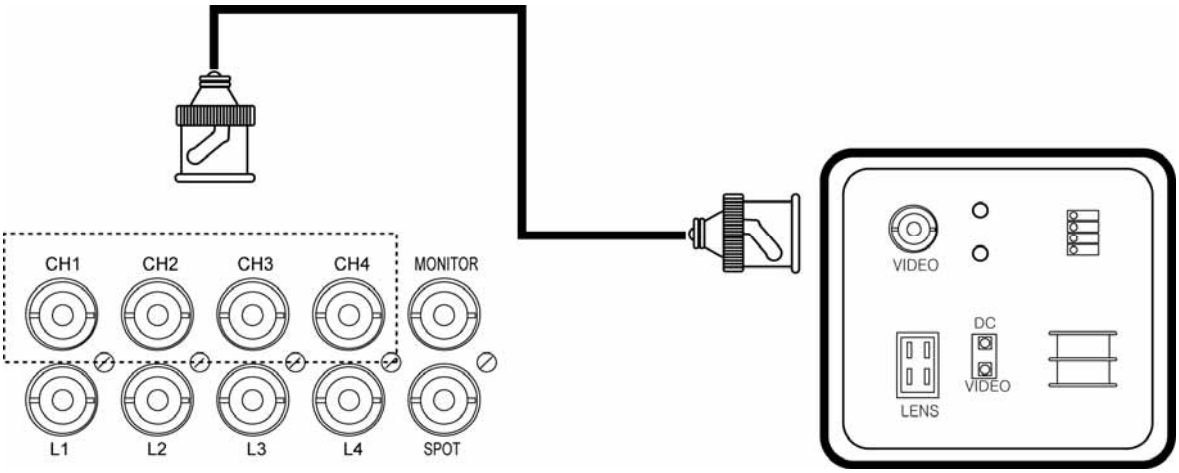


Figure 5 Camera Connection

Connect the cameras to the Video In ports located on the rear panel of the DVR using the proper cables and connectors (BNC Twist Lock). The corresponding video channels can be "looped" out using the "loop out" ports located beneath each video input port. There is no need for terminators to be installed, each port is self terminated. Both NTSC and PAL signals are automatically detected by the DVR and requires no further configuration.

RS-232 Serial Connector

The RS-232 COM port is used to connect the DVR to a PC (optional updating procedure) or to connect an external device like a DVR controller (optional). The required settings to use the RS-232 port can be configured in the DVR settings.

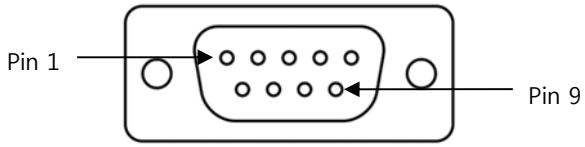


Figure 6 DE-9M Serial Port

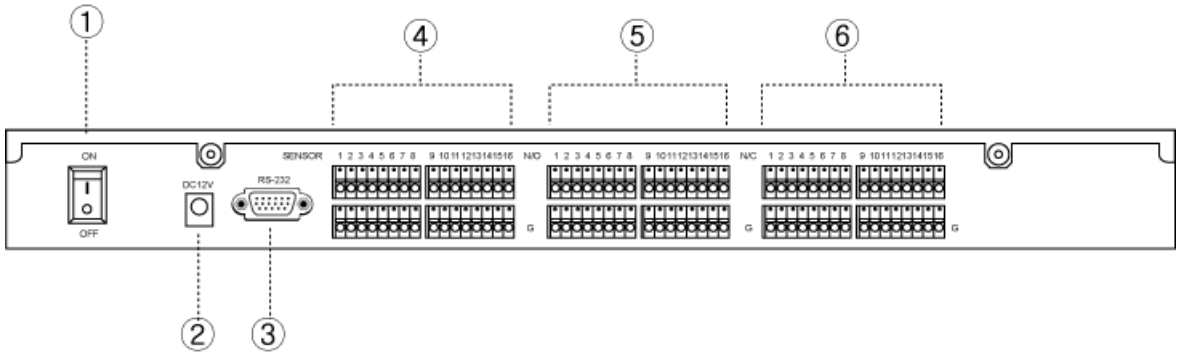
RS-232 / DE-9M Serial Port Pin Configuration Table

Signal Type	Pin Number	Description
DCD In	1	Carrier Detection Signal (not used)
Rx	2	RS232 Receive
Tx	3	RS232 Transmit
N/C	4	No Connection
GND	5	System Ground
N/C	6	No Connection
RTS	7	RS232 Request To Send Signal
CTS	8	RS232 Clear To Send Signal
N/C	9	No Connection

Table 7. RS-232 Pin Configuration

Optional Alarm Sensor Extension Box

There is an optional Alarm Sensor Extension Box that connects to RS-232 port provided in our DVR unit..



① Power switch

② Power adaptor connector

③ RS-232 port (Port connected to the system)

④ Sensor input (1~16)

⑤ Normal Open alarm output : 1~16

⑥ Normal Close alarm output : 1~16

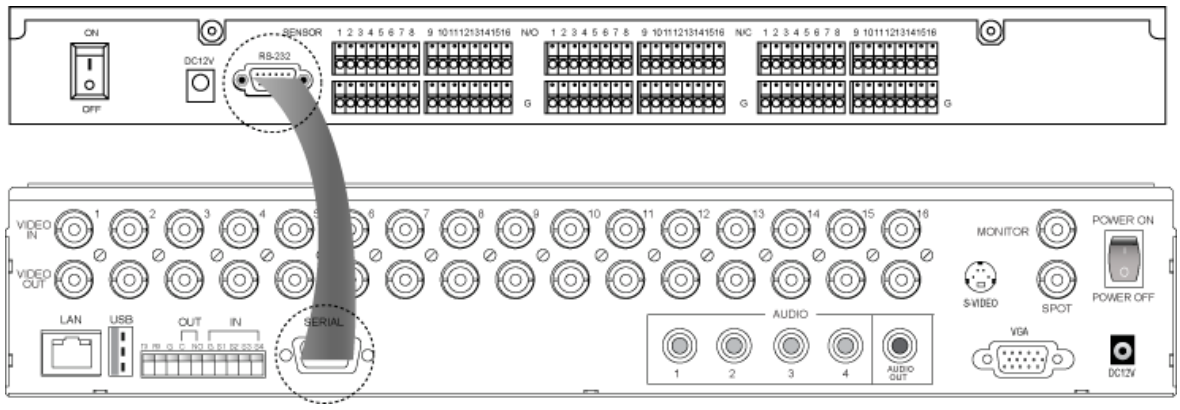


Figure 8 Connection Example of Extension Box

Sensor 1~16 inputs functions same as the S1~S4 inputs (see next section in 10-way terminal Block). Difference is that every port is issued with its own ground connection located right below. Additionally there are 16 NO (Normally Open) dry contact points with dedicated ground and 16 NC (Normally Closed) dry contact point with dedicated ground per points. These NO, NC points are used in Access control integration.

RS-485 Connections

The RS-485 ports are used to connect external PTZ cameras to the DVR. There is single available port with this DVR. External controllers may be used, however you will not have the ability to control the PTZ cameras remotely if you do so.

There are single RS-485 communications ports, these ports are used to connect external PTZ camera controllers.

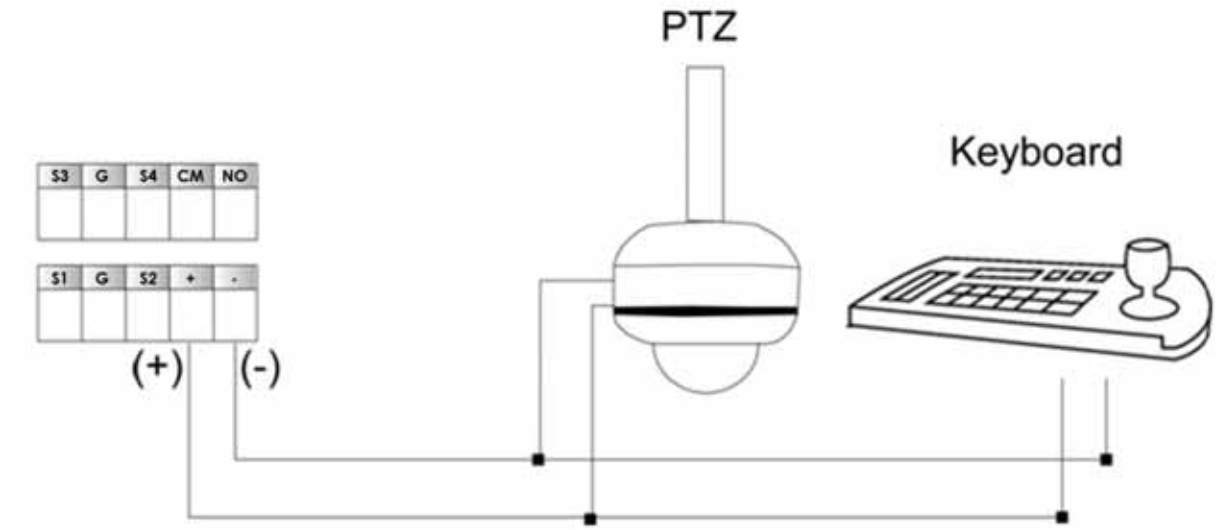


Figure 9 PTZ and Keyboard in RS-485

Alarm Out

Connecting the alarm out:

Each alarm output can be controlled/switched by DVR unit and its application software. Each device must be wired to C (Common) and NO (Normally Open) and 12V DC ground voltage must be applied to the port.

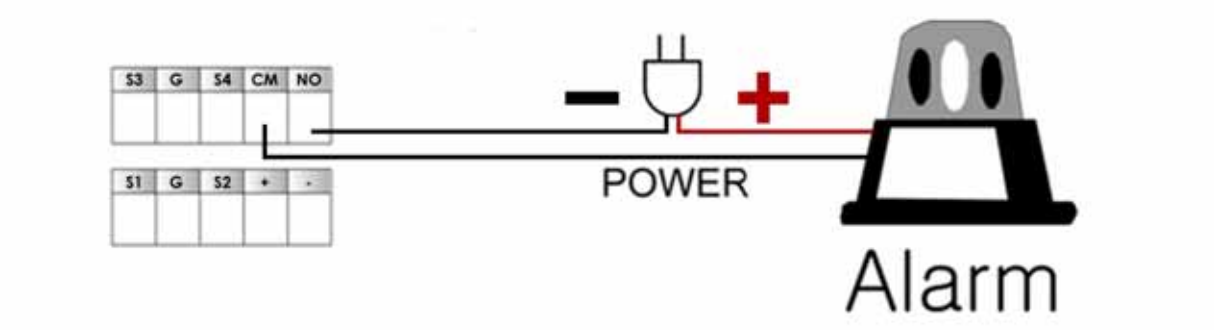


Figure 10 Alarm Out

Sensor Input

Connecting the Inputs:

Each alarm input can be controlled/switched by a device such as a motion/IR sensor, door contact sensor, and similar devices. Each device can either be wired as N/O or N/C (Normally Open/Normally Closed).

Dry contact sensor direct to DVR:

This example is the simplest form of sensor connection for DVR unit. Sensors dedicated only for the function for the DVR and example below depicts that Motion Sensors are not outputting any type of voltage (dry contact).

USB Connection

The USB connection ports are used for both back up and mouse control purposes. Either port can be used for back up via USB memory stick or for mouse control. A third option for the two USB ports are for firmware updating procedures. You will only need to use one port for firmware updates.

Two USB ports are located one front side of the DVR and the other in rear side of the DVR. These ports may be used for both USB mouse connection and for USB memory stick back up procedures

Ethernet Port

The RJ-45 port is used to connect the DVR to a network through a DTE (Data Terminal Equipment) device such as a switch or router with an integrated switch. To connect the system to a network please use a standard RJ-45 cable (patch/straight through) and make sure both ends of the cable are securely connected to the proper ports. Consult your local IT administrator for detailed configuration procedures and setup. The maximum cable length for Category 5e, RJ-45 cable is 100 meter or 300 feet.

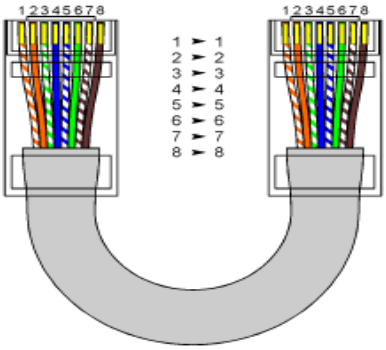


Figure 11 Ethernet Cable Color Code

EIA/TIA E568B Configuration

Signal Type	Pin Number	Description
LAN Tx+	1	Ethernet Transmit Positive
LAN Tx-	2	Ethernet Transmit Negative
LAN Rx+	3	Ethernet Receive Positive
Not Used	4	Not Used
Not Used	5	Not Used
LAN Rx-	6	Ethernet Receive Negative
Not Used	7	Not Used
Not Used	8	Not Used

Figure 12 Ethernet Pin Configuration

Example 1. Direct connection using cross over cable

This type of connection is used mostly for testing the DVR unit and for simple and short cable connection. Since there is no devices providing DHCP services you must fix your IP address to static IP to your DVR as well as your PC. If this is not done properly, then there connectivity of the unit to the PC will not happen. First you must use cross over network cable. This is a cable created with crossing pin 1 to 3, 2 to 6 then pin 3 to 1, 6 to 2.

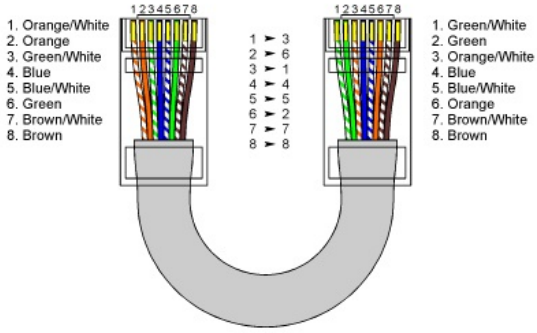


Figure 13 Cross Over Cable

You may now connect directly into PC and DVR unit to communicate directly. Your DVR gateway address and PC's gateway address must be same address. Then you must assign TCP/IP address that belongs to same subnet address as DVR and PC.

Example IP address for DVR

DVR TCP/IP address: 192.168.0.2
DVR's subnet: 255.255.255.0
DVR's gateway: 192.168.0.1

PC's TCP/IP address 192.168.0.3
PC's subnet: 255.255.255.0
PC's gateway: 192.168.0.1

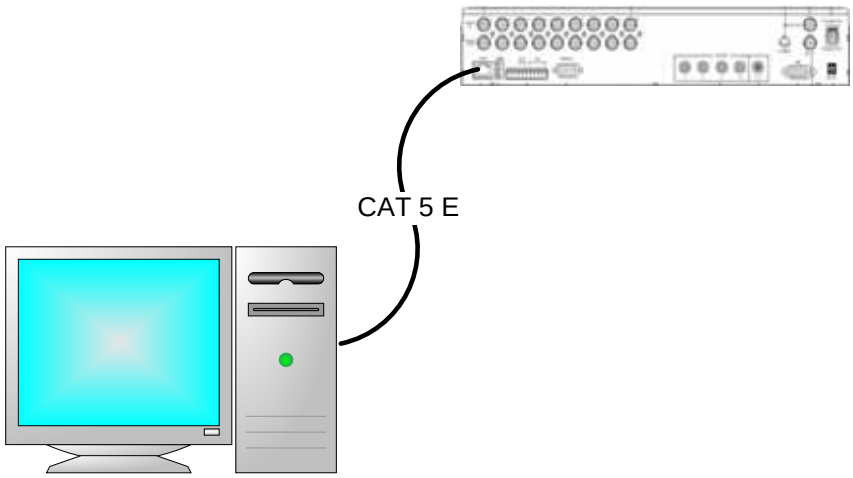


Figure 14. Direct PC Connection

Example 2. Connecting DVR unit to Router

This is most common connection for DVR it is advised that your DVR follow the rules of network policy (Please consult with your network administrator). In this example we are going to assume that router is giving (leasing) TCP/IP address. When router is giving TCP/IP address to the unit this action is possible via Dynamic Host Control Protocol otherwise known as DHCP.

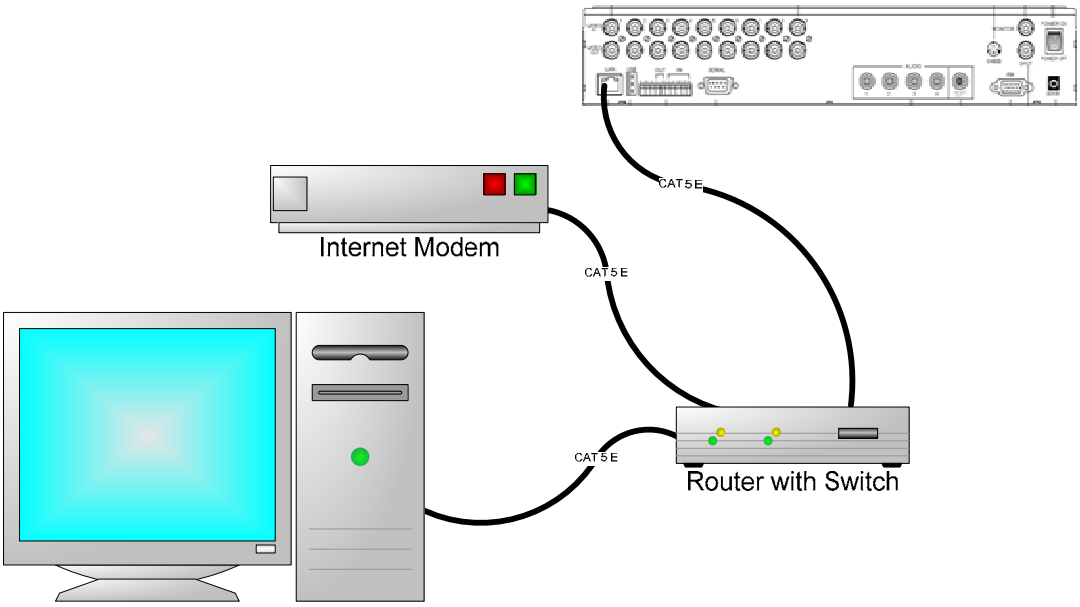


Figure 15 Modem and Router Configuration

Quick Setup

1. Placement

Step 1. Preparation

Remove unit from out of the box and place it on the table top as seen below.

Figure 16 Table top placement

2. Connection

After unpacking the unit you must connect all camera connections, monitor connections, network connection, power connection and other optional connections.

Step 1. Connect Cameras to DVR unit

Figure 17 Camera to DVR

Step 2. Connect monitor to DVR unit

Depending on what type of monitor you are connection connect either to VGA or BNC monitor of your choice. If you have both types of monitor you may connect both of them.

Figure 18 VGA or Monitor Connection

Step 3. Connect Network Cable to DVR unit

Figure 19 Ethernet Cable to DVR Unit

Step 3. Optional PTZ, Sensor, Alarm

Figure 20 Terminal Block Connection

3. Quick Power On

Power input – connection port for DC 12 volt

Step 1. Included DC Power adapter is located in accessory box.

Step 2. Take the adapter and connect it with power cord.

Step 3. Connect the DC 12V male connector to female DC 12V port.

Step 4. Connect to the wall outlet then plug the cable into the DVR.

4. Initial Boot

After turning on the DVR unit it will go into a boot sequence. At the initial boot section there is no user interaction with DVR unit however please observe to see if DVR unit is properly booting.

As you may notice progress bar will indicate booting progression, if there is no activity for long period of time then possible corrupt or damaged firmware in DVR unit. Please indicate such failure and contact technical support.

5. Setup Screen

To initiate setup menu you may use following method

Mouse
Right mouse click anywhere on the screen of DVR

Remote
Press button labeled "Menu" on remote controller

Frontal Keypad
Pressing button labeled "Menu" on front of DVR unit's directional key pad button.

6. Labeling Camera

Sometime camera location may be identified easier by giving logical name to the camera. Here are steps to give logical name label instead of having default label.

Here you may choose camera(s) that you want to give logical name and repeat to other camera(s) as needed. In this example we have chosen Camera 1 marked Ch1 and will change the label to door1.

Click Camera Number to change then use the on screen key pad to change the label as shown below. When done giving name select and choose Enter to end typing.

7. Enable Recording

Main and primary function of DVR is to record video. Below section is showing how to configure all cameras to record immediately. DVR already may be configured to record on the HDD.

Step 1. Select "Record" item on upper main category then by default "EVENT RECORDING" tab should appear as shown on screen below.

Figure 21 Event Recording Page

Step 2. You may also select "All" from the Channel (#) to modify all the channels at one time.

8. Prepare Network

Step 1. Select "Network" item on upper main category then by default "IP ADDRESS" tab should appear as shown on screen below.

Figure 22 IP Address Page

Make sure that DHCP is selected if you have a router that leases IP address to network. If you want to give the IP Address value to unit directly then uncheck the DHCP check box and input IP Address directly where ⟵ (Arrow) is pointing to. Also make sure to assign proper port number as shown above.

Important Note: when to use DHCP vs. Static IP

DHCP is short for Dynamic Host Communication Protocol where IP address is given to the DVR and these IP address are leased to the unit. Usually IP address are none routable internal IP Address. Internal IP address or known as Private IPv4 address, they may be starting with 192.168.0.0 ~ 192.168.254.254 (16-bit block enabling 65,536 IP address set) also known as class C IP address, 172.16.0.0 ~ 172.31.254.254 (20-bit block enabling 1,048,576 IP address set) also known as class B address, or 10.0.0.0 ~ 10.254.254.254 (24-bit block enabling 16,777,216 IP address set) also known as class A address. So if your router or DHCP server gives the IP address that are class A, B, or C address shown then you can confirm that there is a DHCP services available on your network but if you get IP address

ranging from 169.254.1.0 ~ 169.254.254.255 then you have been assigned pseudorandom IP address and it is a indication that there are no DHCP service available for DVR device.

Static IP setting is used when your ISP (Internet Service Provider) gives routable IP they are call Public IPv4 address. They are IP address that points to the DVR unit without relying on DHCP service. In situation such as this case you may configure IP address as recommended by ISP. Often times Static IP is still used with class A, B, or C address. In those cases, you must point to IP addresses that are not in lease range of the DHCP scope (IP address not issued by DHCP services but must be in same Subnet and Gateway IP). Users tend to use this method when certain IP address out of DHCP scope where particular IPs are configured to use NAT, IP forwarding, or DMZ (NAT, IP forwarding and DMZ are used in most router to enable incoming traffic to specific IP addresses).

Step 2. Configure Port for incoming traffic. You must have NAT, IP forwarding or DMZ configured in your router in order to allow in bound traffic to your network. And Port assign to allow inbound traffic to local IP assign to DVR should be identical to Port configuration with DVR. See figure below but your router configuration page might look different.
and DVR.

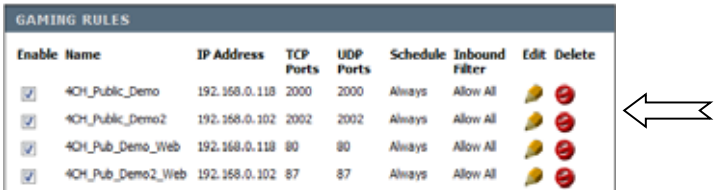

GAMING RULES
Enable Name IP Address TCP Ports UDP Ports Schedule Inbound Filter Edit Delete
4CH_Public_Demo 192.168.0.118 2000 2000 Always Allow All
4CH_Public_Demo2 192.168.0.102 2002 2002 Always Allow All
4CH_Pub_Demo_Web 192.168.0.118 80 80 Always Allow All
4CH_Pub_Demo2_Web 192.168.0.102 87 87 Always Allow All

Figure 23 Port Forwarding Example

All above steps mentioned in Chapter 3. Quick Setup will ensure that you will have DVR connect to Cameras, enabled recording and basic network configuration.

Chapter 2. Basic Information

2-1. Menu Display

It's available to make setup with menu button on front panel, a mouse and a remote

☞ Display Setup Menu with a front panel button

There are 'Menu' button on the front of unit. Press it to display Menu.

☞ Display Setup Menu with a remote

Press Menu button on a remote.

☞ Display Setup Menu with a mouse

Mouse right click to display pop-up menu. Select the menu you want to do setup.

2-2. Description of Icon

[1] The icons on the live screen indicate the status.

Recording

Video Loss

Motion Detection

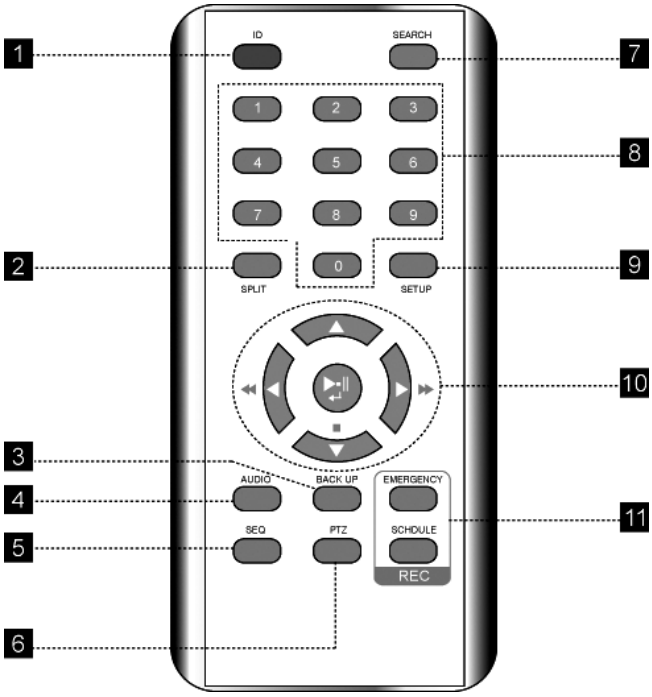
Sensor

[3] Status Bar

1. Display date and time
2. ER means Emergency Recording and SR means Schedule Recording.
3. Show network status and key lock
4. Show HDD status and display "Overwrite" when overwriting previous data.

2-3. Remote Controller

It is available to control every function with a remote. Controlling several DVRs with a remote is available..



[1] ID : Press to select a remote controller ID in case of using one remote controller to multi DVRs.

[2] SPLIT : Press to see split mode. Once press. Same button with Quad button

[3] BACK UP : Press to start recorded data archiving to external media

[4] AUDIO : Select a audio channel

[5] SEQ : Press to display each camera in sequence for specific duration.

[6] PTZ : PTZ control menu...

[7] SEARCH : Call search menu to playback recording image.

[8] NUMBER BUTTON : Input the channel number to make full screen mode or the number in setup menu.

[9] SET UP : Press to display setup menu.

[10] DIRECTION KEY / CONFIRM BUTTON / PLAYBACK CONTROL

[11] Record Button

- EMERGENCY : Emergency Recording Button
- SCHEDULE : Schedule Recording Button

2-4. How to Set Remote Controller ID

In order to use remote controller, the ID must be same both DVR and remote controller. By assigning DVR ID, it allows the user to control multiple DVRs with one remote controller.

[1] Check current system ID and can be changed by user. (Factory default ID: "0")
Menu > System > Information > Remote ID (Range: 0 ~ 99)
System ID must be configured on DVR system menu. It cannot change DVR system on remote controller.
[2] How to use remote controller
ID must be identified between remote controller and system. Otherwise remote controller doesn't recognize DVR correctly.

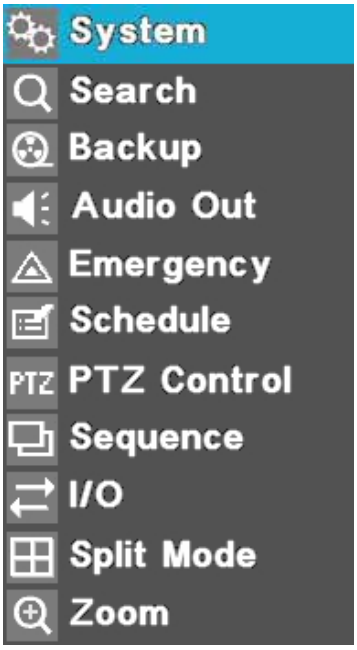
Remote controller ID menu displays as above image when you press ID button of remote controller.

- DVR ID : It displays current ID of the system.
- "0" : Input the same ID number of DVR and press "Confirm"

2-5. How to Display Setup Menu

It is available to display menu with front panel buttons, remote and mouse.

[1] Front panel button : Push "MENU" button on the front panel.
[2] Mouse : Right-click
[3] Remote : Push "MENU" button



Go to main menu
Go to search menu
Go to backup menu
Go to audio output menu
Start emergency recording
Start schedule recording
Go to PTZ Control menu
Start sequence
Switch output to Alarm or internal buzzer
Change display split mode
Magnify the image at live or playback

2-6. Zoom In/Out

Magnify the image at live or playback.

[1] How to magnify with a mouse

Locate the mouse pointer on the place you want to magnify. And click the left button of mouse and drag it. You can cancel by dragging with mouse left button clicked. (Also you may use "Zoom In / Zoom Out" menu by displaying menu)

[2] How to magnify with a remote (Front panel button)

• On Live : Display Menu and select "Zoom In/ Zoom Out". And move with direction buttons. Select Menu button to cancel

• On playback : Select "Emergency Recording" and move with direction buttons. Select Menu" to cancel.

Chapter 3. System Configuration

3-1. Information

[1] Remote ID : Assign the ID of remote controller, so that user can separately control multiple
DVR unit with one controller. (ID range: 0 ~ 99)

[2] Mouse Resolution : Mouse sensitivity level can be adjusted at user's convenience.
(Basic Level 1; Slow speed, Level 1 < Level 2 < Level 3 to increase reaction speed.)

[3] Language : Select a language
[4] Vertion : Show S/W, H/W and N/W

[5] Health : Indicates storage status

- Hard Disk 1~3 : Display the temperature of hard disk
- E-SATA : Display the temperature of hard disk connected to E-SATA
- Board : Display the temperature of the DVR's main board.

[6] Video Detect Mode : Select a video signal format. (NTSC / PAL)
[7] Video Mode : Display video signal format
[8] WEB Code : DDNS ID for DDNS connection.
[9] MAC Address

3-2. Time/Date

[1] Time : Set time

[2] Date : Set date

[3] Date format : Select a Time/Date display format.

[4] Daylight Saving Time : Set "ON" to apply daylight saving time.

Enter Month/Week/Day to begin and also enter Month/Week/Day to end.

[5] Time Server : Set time automatically through internet.

- Time server : Input the URL of server (Default : kr.pool.ntp.org)
- Synchronize Period : Select the period to syncronize between DVR and time server
  - Power On : Try to sync once power on.
  - 12Hour : Try to sync every 12 hours.
  - 24Hour : Try to sync every 24 hours.
- Time Zone : Select Standard time

[6] Apply : Save and apply time / date setting.

3-3. Password

[1] ID : Available to register max 8 account("Admin" and "User1~7)

- admin : Administrator ID
- User1~7 : User ID

[Note] Default password of all ID is "11111111".

[2] Assign an authority per selected ID

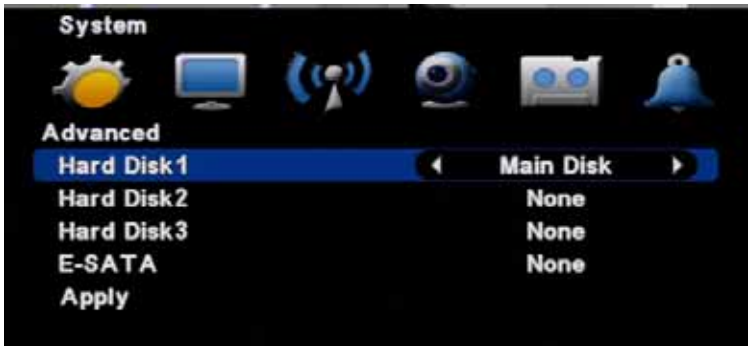
- Configuration : Available to set configuration
- Hard Disk : Available to set Hard Disk
- Search : Available to search
- Backup : Available to back up
- PTZ Setting : PTZ operation is available

- PTZ OSD Menu : Assign an authority to display PTZ OSD menu
- Record Key : Assign an authority to use "REC" on the front
- Camera : Available to see the selected channel

3-4. Hard Disk

As it is related to recording, if any setting is wrong, system error or abnormal recording could happen.

[1] Hard Disk List : It provides the information for Hard Disk, external USB Hard Disk and format.



- Hard Disk 1~3 : Display the Hard disk capacity internally mounted
- E-SATA : Display the capacity of E-SATA
- Delete : Select a disk and format(delete) it

[2] Total : Display total capacity and used capacity of Hard Disk

[3] Over write : Record continuously by overwriting the hard disk

[4] Erase Data : Format several hard disks altogether.

- Main Disk : Format all the mounted disks named "Main disk"
  - Mirror Disk : Format all the mounted disks named "Mirror Disk'

[5] Auto Delete : Keep the recorded data for the selected period and automatically delete the previous data.

[6] Advanced : Select whether a Hard Disk is used as Main disk or Mirror disk.

- Hard Disk 1~3 : Select with which purpose it will be used.
- E-SATA : Select with which purpose it will be used.
- Apply : Save the setting

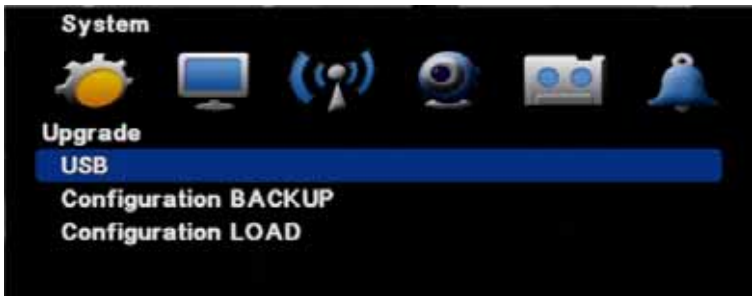
[Note] After setting, select "Apply" to save. Then, the system is rebooted.

3-5. Default Setup

[1] Default Setup : Except major configuration (Network, Password), parameters are initialized.

[2] Factory Setup : All parameters are initialized.

3-6. Upgrade

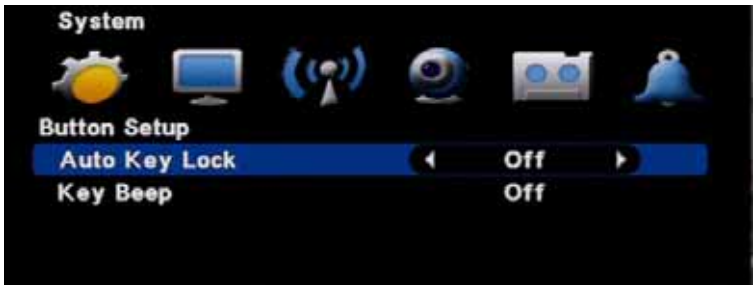


[1] USB (Firmware Upgrade) : In order to upgrade system firmware with USB memory stick, the firmware file must be saved in the USB storage first and then insert to DVR to start USB upgrade from the menu.

[2] Configuration Backup : Save a configuration file of DVR.
[3] Configuration Load : Upload a configuration file to DVR.

3-7. Button Setup

After a certain time passes, screen is automatically locked.



• Auto key lock : There is no key input during specific time, system locks the button automatically. In order to unlock, input the password. (10 sec. 30 sec. 1 min. OFF)

• Key Beep : If you select ON, beep sound occurs

3-8. RS-485

In order to control the PTZ camera or control keyboard, DVR supports RS-485 port.

Baudrate /Parity /Stopbit : Refer to the manual of "Keyboard" or "PTZ camera"

Chapter 4. Display

4-1. OSD (On Screen Display)

[1] Camera Title : ON / OFF

[2] Status Bar : ON / OFF.

[3] Login Display : Select a login option
- As Per Last Login : Display live image after system rebooting.
- Cover All Camera : Do not display live image after system rebooting.

[4] Login menu : Select a log in option.
- Always from boot : Input the password after rebooting.
- Boot after lock : Auto login after rebooting.

4-2. Auto Sequence

• Auto Loss Skip : If there is no video input, it skip video loss channel.

• Display time : Select a display duration while sequencing (1 sec. ~30 sec.)

[Note] Sequence doesn't work on event pop-up.

4-3. Spot Out

Control extra spot output on rear panel. By using additional monitor, event triggered video display and sequence display are available.

[1] Mode

• Sequence : Display videos in selected time order per channel.

• Event : Display event triggered channel.

• Seq+Event : If an event is triggered, the video is displayed first and then in sequence.

[2] Display Time : Set time per channel applied in sequence display.

4-4. Video Output Setup

You can choose a type of video output. This model supports HMDI, VGA and composite output.

[1] Video Output Setup

- HDMI+VGA(S) : Set HDMI as main output and VGA as Spot Out.
- VGA+Composite(S) : Set VGA as main output and Composite as Spot Out..
- HDMI+Composite(S) : Set HDMI as main output and Composite as Spot Out..

[2] Vga Resolution : Select a resolution for VGA out.
(Resolution : 1920*1080 , 1440*900 , 1366*768 , 1280*1024, 1280*720 , 1024*768)

NOTE : HDMI out is fixed at 1920 x 1080 and it is not able to video out with VGA out simultaniously.

Chapter 5. Network Setup

5-1. IP Address

It is the system setup for remote monitoring or backup and it needs the network setup of DVR.

The user must know whether their internet is dynamic IP(DHCP) or fixed IP. Please check it to your ISP before setup.

[1] DHCP : "ON" for dynamic IP user.
"OFF" for static IP user.

[2] IP Address : Input the IP address.
[Example]
• IP address : 61.250.152.050
• Subnet Mask : 255.255.255.000
• Gateway : 61.250.152.001
• DNS Address : 164.124.101.002

[3] DDNS Address : Do not change the DDNS server IP (61.250.157.15)
[4] Use Port : Default port is 3000.
[5] Upnp : If a router supports Upnp, it automatically set port forwarding.
[NOTE] In case of using the router, the user should make port forwarding.
The port forwarding function is described on the router manual.

5-2. Notification

E-Mail Setup

It's a basic setup to send E-mail, so if it is not correct, e-mail couldn't be delivered. So be careful to make Setup correctly.

[1] SMTP Server : Enter Mail Server address to use as SMTP Server. If you don't know the Server address, contact a person who manages SMTP Server you use.

[2] Mail From : Enter the mail address which you use. (It is for preventing a mail blocked as spam.)

[3] Mail Address : Enter recipient's mail address (Available up to 3 account)

[4] Password : Select if ID/Password input is necessary when sending a mail.

[5] Use Port : Most of Mail Servers use 25 for port. Check Port if system doesn't work after setting.

5-3. E-mail Notification

Select which type of notifications you are going to use.

Notification type : You can select the type for E-mail notification.

- Alarm : E-mail is sent with still image when an alarm occurs
- Sensor : E-mail is sent with still image when triggering a sensor
- Motion Detection : E-mail is sent with still image when detecting a motion.
- Video Loss : E-mail is sent when video input is lost.
- Power On : E-mail is sent when power is on after off.
- Password Modify : E-mail is sent when the system password is modified
- HDD Error : E-mail is sent when HDD error happens

5-4. Web Server

Built-in web server make user can connect the DVR remotely on the Internet Explorer

[1] ON/OFF : Select 'ON' to use remote N/W connection through web.

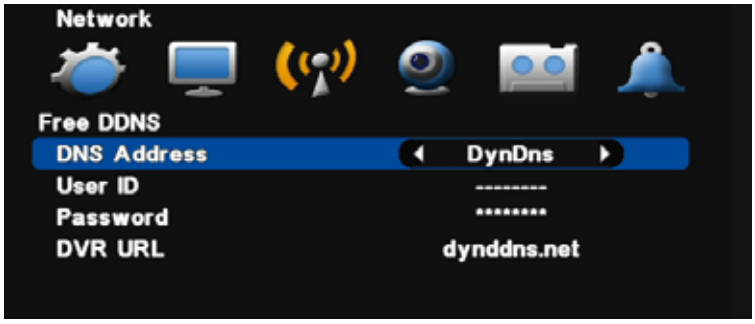
[2] USE PORT : Port for remote connection

5-5. Free DDNS

Free DDNS is used for remote connection through private DDNS service.

Firstly, go to http://www.dyndns.com and create an account. Then, if your system is installed with a router, you must make DMZ setting in the router setup for the IP your system has. DMZ is a function to open all the ports for the selected IP.

Input registered information in DVR setup.

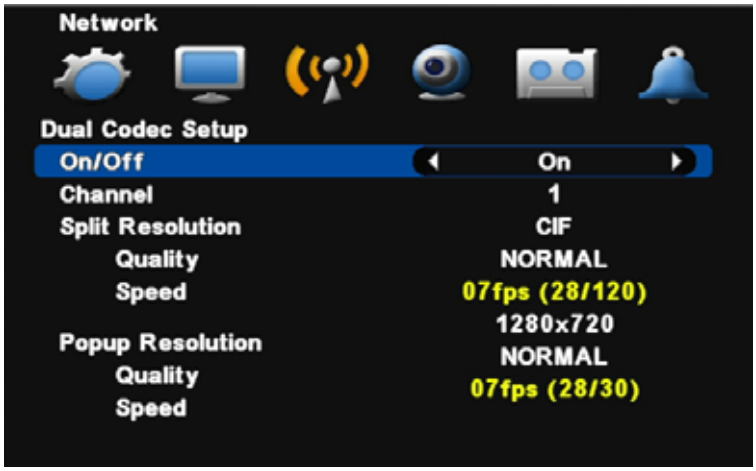


• DDNS address : Select the private DNS service name (Select DynDns)

• User name/ Password/ DVR Address : After creating an account in the relevant website, input the ID/ Password/ URL information allocated to DVR setup.

5-6. Dual Codec Setup

It is available to transmit data through extra network transmission codec. There are two ways of setting. Split Resolution is a transmission mode for split screen and Popup Resolution is a transmission mode for one channel full screen.'



- On/Off : Select "On" to use dual codec setup
- Channel : Select channel to set (Available to set per channel)
- Split Resolution : Transmitting resolution of split screen (Fixed with CIF)
- Picture Quality : Select picture quality of split screen to transmit
- Speed : Select transmission frame of split screen
- Popup Resolution : Transmitting resolution of 1 channel full screen (Fixed with 1280*720)
- Picture Quality : Select picture quality of 1 channel full screen to transmit
- Speed : Select transmitting frame of 1 channel full screen

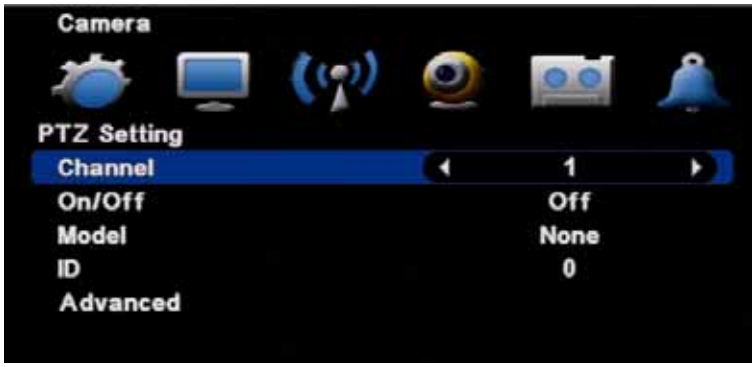
Chapter 6. Camera

6-1. Camera Title

Input a camera title using by virtual keyboard.

Press a space bar to change a language.

6-2. PTZ Setting



[1] Channel: Select a channel

[2] ON/OFF : Enable or disable to use PTZ.

[3] MODEL : Select the PTZ protocol or, model

[4] ID : Select the PTZ ID. (For more detail, refer to the manual of PTZ device.)

6-3. PTZ Advanced Setting

[1] Reverse Control (Pan) : Set the Pan works reverse direction.

[2] Reverse Control (Tilt) : Set the Tilt works reverse direction.

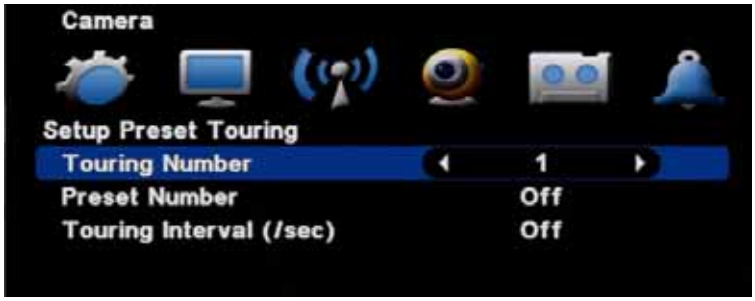
[3] Touring Mode

• Preset Touring : Use touring by DVR setting.

• Camera Touring : Use touring by camera setting. (PTZ camera built-in touring function is available only.)

[4] Setup Preset Touring

It is operable when you select the 'preset touring' from the touring mode' menu.



The touring number is selectable 1~16.

[1] Touring number : Select the number.
[2] Preset number : Select the preset number saved before.
[3] Touring interval (/SEC) : Select the touring dwell time.

[NOTE] PTZ protocol selection
Protocol is PTZ moving driver. The protocol is registered as per the camera model name or protocol name. Please check whether you PTZ is usable for this DVR. The touring is supporting when the camera itself support the touring function.

6-4. How to Use PTZ

[How to call the PTZ menu]

• Mouse menu: Click the right button of mouse and select the 'PTZ'.

• Remote controller menu: Click the "PTZ" from remote controller.

(1) Select PTZ Button on the remote controller

• When you select PTZ button, + shape icon appear. Then move to the channel you want by the direction key.

(2) If you moved to PTZ channel, then after pushing "SET UP" button, select the menu to operate.

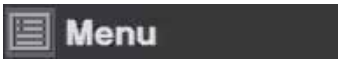
• PanTilt : Control the direction by the direction key in remote controller.

• Preset : Input the preset number to be moved or saved and select this menu.

(Preset Save) (Preset moving)

• Tour : It tours as per the saved preset number.

• MENU : It can recalls the PTZ camera OSD menu



• Channel : Change channel at split screen. Available to move with direction button after selecting a channel. (Only work on split screen)

• Auto Focus : Adjust the focus automatically.

• Exit : Escaping the PTZ mode

Chapter 7. Record

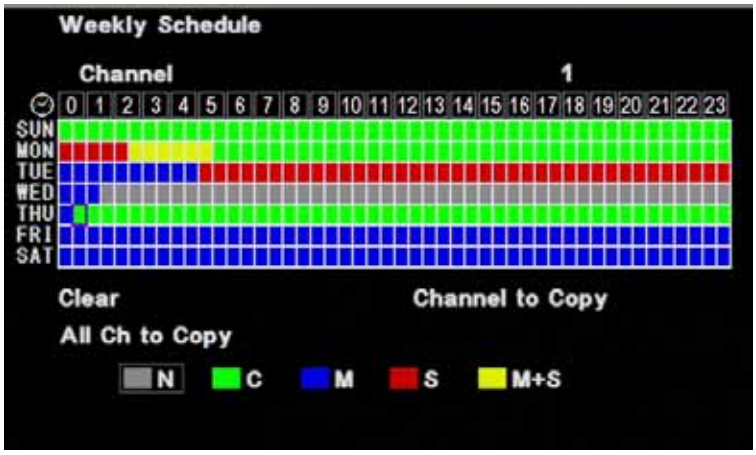
7-1. Record Setting

Set resolution, quality, recording speed and audio. Each setting affects the size and picture quality.

[1] Channel : Set channel
[2] On/Off : Set On or Off for recording
[3] Resolution : Set resolutioin
[4] Quality : Set picture quality of recorded video
[5] Speed : Set record frame
[6] Post-Recording : Set recording duration time after an event is triggered.
[7] Record Audio : Set On or Off for audio recording

7-2. Schedule Record

Set schedule record per day of the week, time and channel. And setting per hour is also available.



- N (Grey) : No record
- C (Green) : Continuous record
- M (Blue) : Motion detected record
- S (Red) : Sensor triggered record
- M+S (Yellow) : Recording by motion detection or sensor triggering

[How to setup]

• Select a channel

• After selecting the day of the week and time, every mouse click makes color shift like N(Grey) → C(Green) → M(Blue) → S(Red) → M+S(Yellow)

• After selecting the other day of the week and time, every OK button click makes color shift.

• Clear : Delect the schedule of the selected channel

• Channel Copy : Copy the currently set recording schedule to the selected channel.

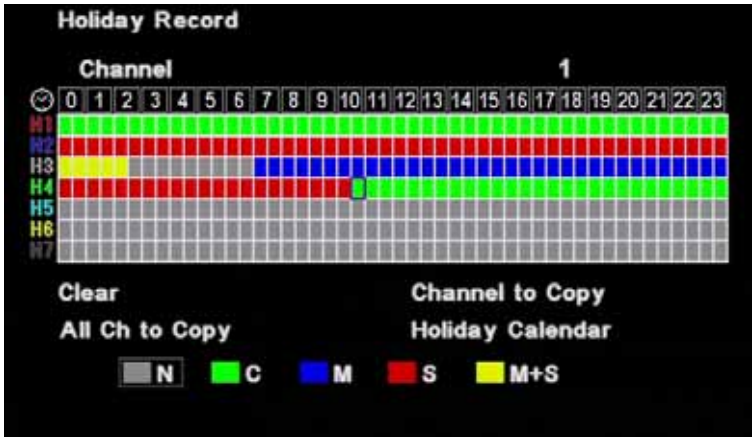
• All Ch to Copy : Copy the currently set recording schedule to all channels.

7-3. Holiday Record

Set holiday record with different option.

[1] 7 different holiday setup can be made.

After selecting record type from H1 to H7, set time with dragging mouse or remote direction.



[2] Select the Holiday on Holiday Calendar and then set the holiday type among H1 to H7.

Every mouse click on the selected date makes color shift and available to set from H1 to H7.

Chapter 8. Event Setup

8-1. Sensor

It is for sensor setup.

[1] Sensor Input : Select the sensor input channel.
[2] On/Off : Select the sensor usage.

[3] Input Type: Select the sensor input type.
• N/Open (NORMAL OPEN) : The contact is normally opened but close when the signal is generated.
• N/Close (NORMAL CLOSE) : The contact is normally closed but open when the signal is generated.
[4] Related camera: Select the camera to be related with sensor. Multi-selection is possible.

8-2. Motion Detection

It is the motion detection setup menu.

[1] Channel : Select the motion detection channel.
[2] On/Off : Select the motion detection usage.
[3] Sensitivity : Select the sensitivity of motion detection. Please apply it after the actual testing.
[4] Detection Area: Select the motion detection area. (1~5)

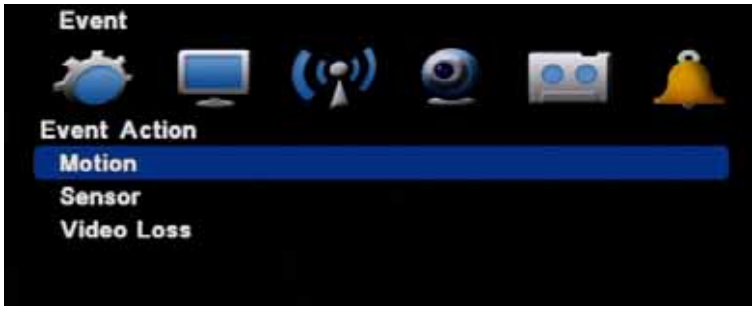
The cursor moving by the direction key and if press "enter", this block is designated for motion detection.

- MD selected area : Pink color
- MD non-selected area : Transparent
- If the movement is detected, the color of that area turns green.

[Using mouse]
Locate the pointer on start point and click the right button then dragging to the ending point.

8-3. Event Action

Event record will be made as per the setup.



[1] Motion : It is the setup for PTZ, pop-up, relay out, buzzer in motion detection.

- Channel : Select the channel to apply.
- Preset channel : Select the preset camera being applied for the event.
- Preset number : Select the preset number to move.
- Popup Channel : Select the usage Popup usage by ON/OFF.
- Popup Duration : Popup window floating time.
- Relay out : Select the alarm out
- Relay duration : Relay out duration.
- Internal buzzer : Internal buzzer usage.

[2] Sensor : It is the setup for PTZ, pop-up, relay out, buzzer in sensor triggering.

- Preset channel : Select the preset camera being applied for the event.
- Preset number : Select the preset number to move.
- Popup Channel : Select the usage Popup usage by ON/OFF.
- Popup Duration : Popup window floating time.
- Relay out : Select the alarm out
- Relay duration : Relay out duration.
- Internal buzzer : Internal buzzer usage.

[3] Video loss : It is the setup for PTZ, pop-up, relay out, buzzer in video loss.

- Preset channel : Select the preset camera being applied for the event.
- Preset number : Select the preset number to move.
- Popup Channel : Select the usage Popup usage by ON/OFF.
- Popup Duration : Popup window floating time.
- Relay out : Select the alarm out
- Relay duration : Relay out duration.
- Internal buzzer : Internal buzzer usage.

Chapter 9. Search

9-1. Search Menu

It supports the various ways of search mode such as Calendar, Date/Time, Event, etc.

[1] How to call menu : Select the "SEARCH" from remote controller and right button of mouse.
[2] Search mode selection

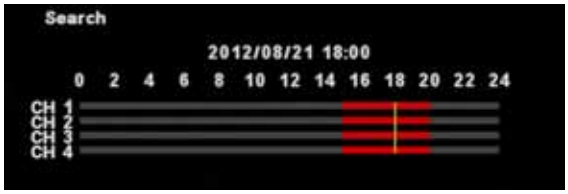
· Calendar search: It searches by calendar.
· Date /Time search: It searches specific Date/Time.
· Event search: It searches as per the event.
· Go to first : It searches the first recorded data on HDD.
· Go to last : It searches the last recorded data on HDD.

9-2. Calendar Search

It searches using by the calendar.

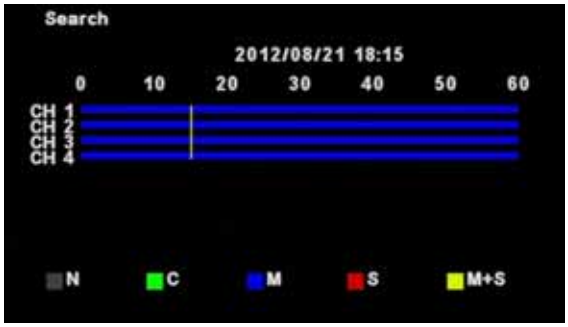
[1] If there is the recorded data on DVR, it shows red color on recorded date. Using the direction
key, you can change the YEAR/MONTH/DATE.

[2] If there is the recorded data, it shows red color so, press the enter button on selected date.



(Channel display could be different per model 4ch/8ch/16ch)

[3] The recorded data shows as a graph and select the minutes to search.



(Channel display could be different per model 4ch/8ch/16ch)

9-3. Date/Time Search

If you know the specific date/ Time, input the time to search.

[1] Record begin : It shows the record began time.

[2] Record end : It shows the record end time.

[3] Channel : Select the channel to search.

[4] Play Begin : Input the time to search.

[5] Play : If you click "Play", it playback the selected time.

9-4. Event Search

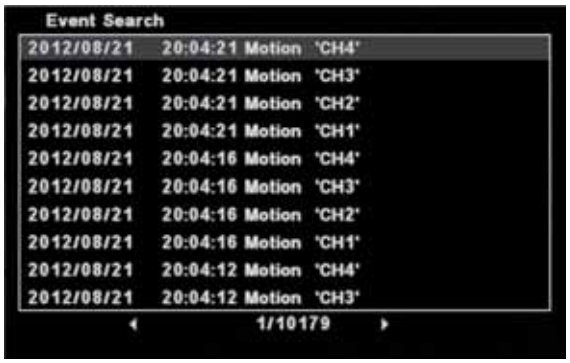
It searches event recorded data.

[1] Record begin : It shows the record began time.

[2] Record end : It shows the record end time.

[3] Channel : Select the channel to search.

[4] Play Begin : Input the time to search.



[5] Play : If you click "Play", it playback the selected time.

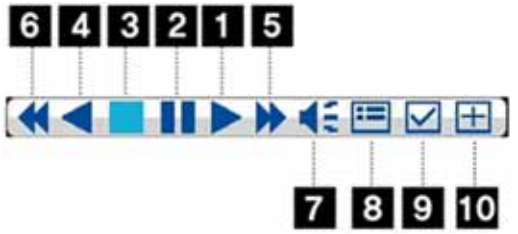
9-5. Go to First / Go to Last

It searches the first or last recorded image.

9-6. Search Control

[Control by Mouse]

Description of search button



[1] X1 playback
[2] Pause
[3] Stop
[4] Reverse playback
[5] Playback speed control
[6] Reverse playback speed control
[7] Audio during playback
[8] Calendar search during playback
[9] Mark In-Mark Out : If you click it during playback, it recognizes as a backup start time and if
you click it once again, it recognizes as a backup end time. After this, it moves to the backup
menu automatically.
[10] Screen magnifying function in the full screen. (Use Emergency recording button on the remote controller.)

[Control by Remote Control]

Use the direction from the remote control to control the speed

9-7. Audio

Audio can be listened in Live or Search.

.

[1] Menu recall : If you select the "AUDIO" during the live or playback, the audio out menu show

up. The menu call is possible by remote controller or mouse.

[2] Mode selection

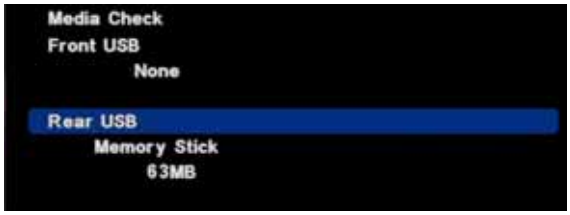
- OFF : No audio use.
- CH1 : Audio out only from CH1
- CH2 : Audio out only from CH2
- CH3 : Audio out only from CH3
- CH4 : Audio out only from CH4
- Auto : Only selected channel audio out.
- Volume control : If the length of bar increase, the volume louder.

Chapter 10. Backup

10-1. Backup

Selected image can be backup to the external device(USB). Connect the USB pen drive to the DVR and select 'BACKUP' button from remote controller or, click the right button of mouse.

[1] Select the recognized backup device. If it recognized normal, it shows the device capacity such as "XXX MB".



[2] Select the date from Calendar.

[3] Select the time by double click.

(Channel display could be different per model 4ch/8ch/16ch)

[4] Select the minute. Once you select "Start", the time will be automatically input.

[5] Backup end time selection

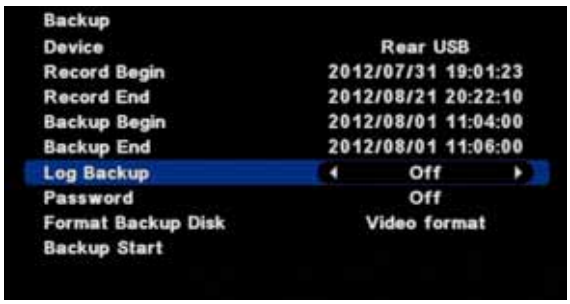
• If the backup end time is the same hour, select the minute and click, "end", the time will be automatically input.

• If the backup end time is the different hour, go back to the previous menu by right button of mouse or, "MENU" button. Then, select the hour/minutes and click "end" for automatic time input.

[6] Camera : Select the channel to be backup.(Selected channel will be shown as red)

[7] Backup Start : If all setup is completed, click the 'Backup start' button then, backup starts. It shows the backup capacity/ USB pen drive capacity" so, if everything is OK, click 'OK'.

[8] Before backup, it shows the USB port, backup time then, select OPTION.

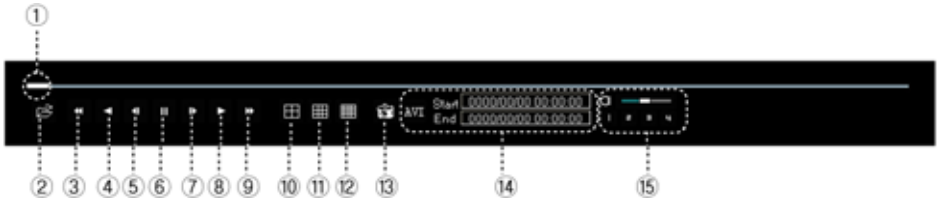


• Log Backup : The log file will be backup together.
• Password : Backup data can be protected by the password.

• Format Backup Disk : Select whether the viewer program will be backup together with data file.- Executable format : Viewer program will b backup together

[9] Backup Start : The backup start after click 'OK'

[10] How to use the viewer program(If you click the backup file, it runs automatically).



① Scroll bar : It shows the current location from the total playback volume.

② Open : To open the other backup file.

③ Fast reverse playback

④ Reverse playback

⑤ One step reverse playback

⑥ Pause

⑦ One step playback

⑧ Playback

⑨ Fast playback

⑩ 4 split screen

⑪ 9 split screen

⑫ 16 split screen

⑬ Current image capture

⑭ When you convert it to AVI . You can click the 'START' and 'END' time(circled space) during

playback and if you click 'AVI', it converts to 'AVI' file.

⑮ If you click it, you can listen to the recorded audio of selected channel.

SPECIFICATIONS

		FDS-440SDI
Operating System		Embedded Linux
Compression		H.264
Audio compression		G723.1
Video Standard		NTSC / PAL
Video In/Out	Input	4Ch
	Output	1 x HDMI / 1 x VGA / 1 x SPOT(BNC)
	Resolution	Max. 1920 x 1080
Playback speed		4CH 80FPS, 1CH 30FPS
Live		Realtime
Split Mode in Live Display		1, 4
Record Resolution		1080P : 1920*1080, 1920*540, 960*540 720P : 1280*720, 1280*360, 640*360
Record Speed		NTSC: 30fps@1080p per Channel / PAL: 25fps@1080p per Channel
Record Mode		Continuous, Schedule, Alarm, Motion, Emergency
Search	Mode	Calendar, Date & Time, Event Search, First Search, Last Search, Backup Search
	Speed	x1, x2, x4, x8, x16
Audio	In /Out	4/1
Sensor In / Alarm Out		4/1
PORT	RS-232	External Keyboard controller & PTZ
	RS-485	
	LAN	10/100/1000 Base-Tx Ethernet (RJ-45) - Fixed IP, DHCP & DDNS
Network Transmission		Video Dual-Stream (Local recording & Network Transmission)
Remote Management		Built-in Web server (IE browser), iPhone, Android,
Backup Device		Local Backup by USB Memory Stick and Network Backup by CMS
HDD		(3 * SATA HDD & 1 * E-SATA HDD) or (2 * SATA HDD & 1 * E-SATA HDD & 1 * SATA ODD)
Etc.		PTZ control by virtual joystick(operated by mouse) Backup Viewer auto copy & AVI export
Power		Adaptor 12V 6.67A
Operating Temp.		0℃ ~ 40℃
Dimension		358 mm(W) X 67mm(H) X 335mm(D)
Weight		3.5Kg

▒ Chapter 11. Mobile Applications ▒

Mobile and Remote Client Applications

1. iPhone

iPhone Application Installation

1. Access the "App Store" from your iPhone or iTunes application.
2. Search for "MPRMS".
3. Choose to download and install the application (there is no charge to use our MPRMS application).
4. After the installation is complete, launch the MPRMS application from your iPhone.

Adding a DVR To Your iPhones MPRMS Application

Launch the MPRMS Application, and press "New"

Enter the "Reg Name" (Registration Name). This can be any name to identify the specified DVR. **Make sure there are NO SPACES in the Reg. Name.**

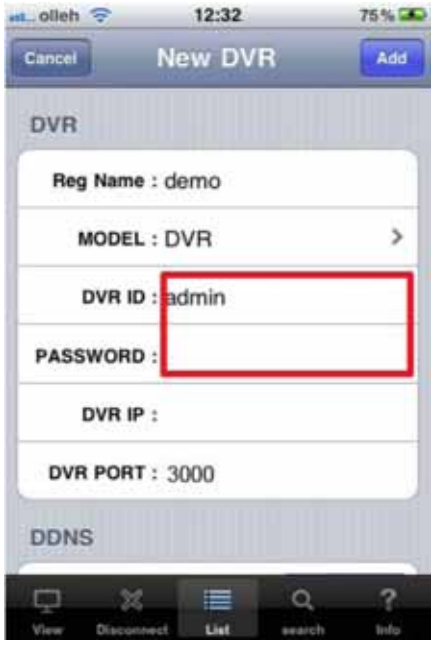
Select the DVR Model:

H.264 DVRs' = DVR

MPEG4 DVRs' = FDS-110

MJPEG DVRs' = MJPEG

Enter the login information of the DVR. The login information MUST MATCH the login information on the DVR.



DVR ID: Enter the User ID for accessing the DVR.

Password: Enter the password for accessing the DVR.

Enter the DVR IP Address & Port Number (You can also enter the domain name address here)

DDNS Use

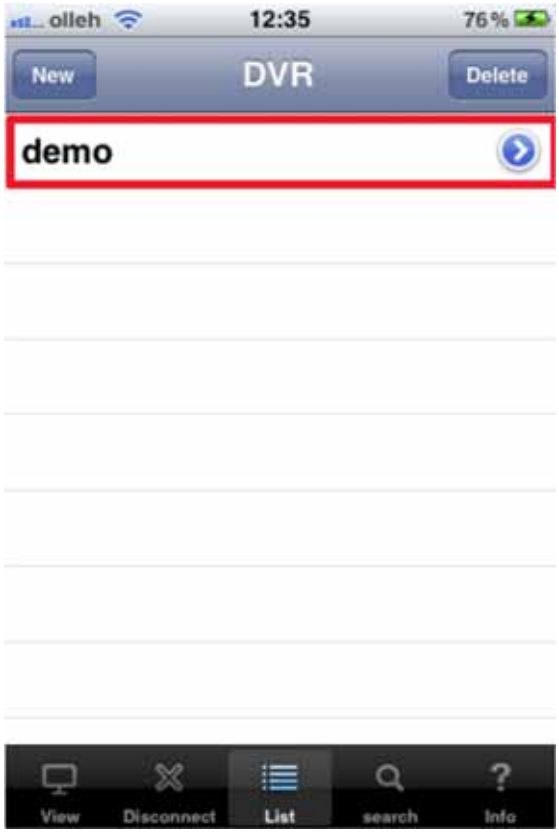
Please disregard this configuration option if you are using DVR within the United States. This feature is used in the following regions:

Asia

Connecting to the DVR

Press the DVR on the site list to connect

NOTE You will be prompted that there will be a "N/W Connection Charge". **THIS IS ONLY A REMINDER TO USERS WITHOUT AN UNLIMITED DATA PLAN, WE WILL NOT CHARGE YOUR ACCOUNT FOR DVR REMOTE ACCESS.**



Connect remote access

"CH SELECT" to select camera number.

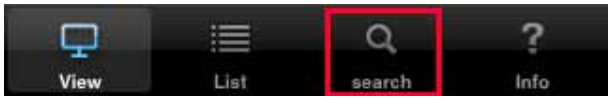
PTZ : select when controlling pan-tilt

The screen displays only video excluding time, resolution and the name of channel.

The feature is designed to transmit still photo in certain intervals when video streaming is interrupted due to network load.☞ See full screen : If you set aside iPhone, it switches into full screen. (Touch any area of full screen viewer to retrieve menu)

Search from iPhone

Select "search" the icon below.



[1] Select Date/Time

After selecting a date, select "SEARCH".

[2] Search key operation

Play reverse

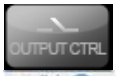
Pause

Play

Switch to Live

Controlling Relay-Out from iPhone

Relay can be controlled remotely..



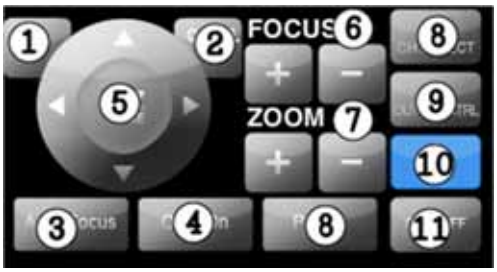
Time selection : Set the duration time of alarm output

Off : Alarm off

Infinity : Keep the alarm output continued

PTZ control from iPhone

PTZ control is available on iPhone. The way how to control is the same with on CMS and DVR



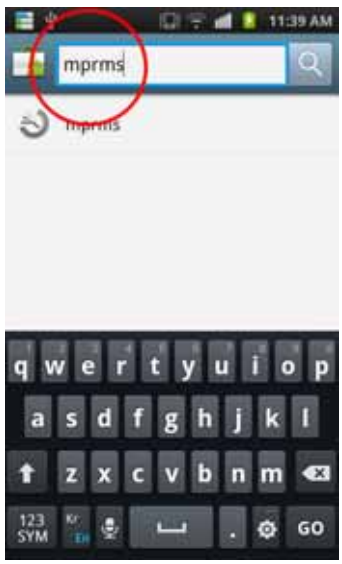
(1) Select
(2) Cancel
(3) Automatic camera focus
(4) Call the PTZ menu
(5) Direction button
(6) Camera focus control
(7) Camera zoom control
(8) Select the channel
(9) Relay out button (A user can set relay out)
(10) Select the PTZ menu
(11) OSD display On/Off button for live screen

2. Android Phone

Program Installation for Android

To install the program on the Phone, execute the 'MARKET' program and download the 'MPRMS' to install. If the installation is completed, you will see the 'MPRMS' icon on the main SCREEN.

(1)



(2)

(3)

Application Execution for Android

Select "MPRMS" to execute the program.

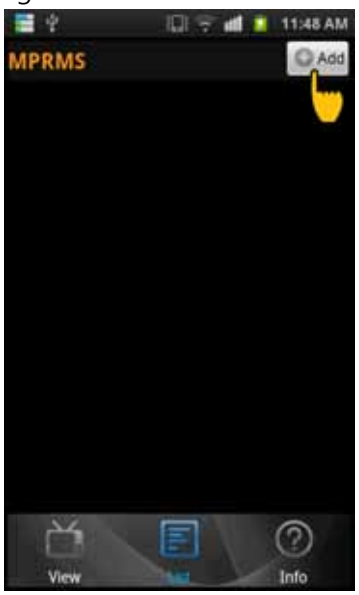
(Select the icon)

(Executed Program)

Register the product information for Android

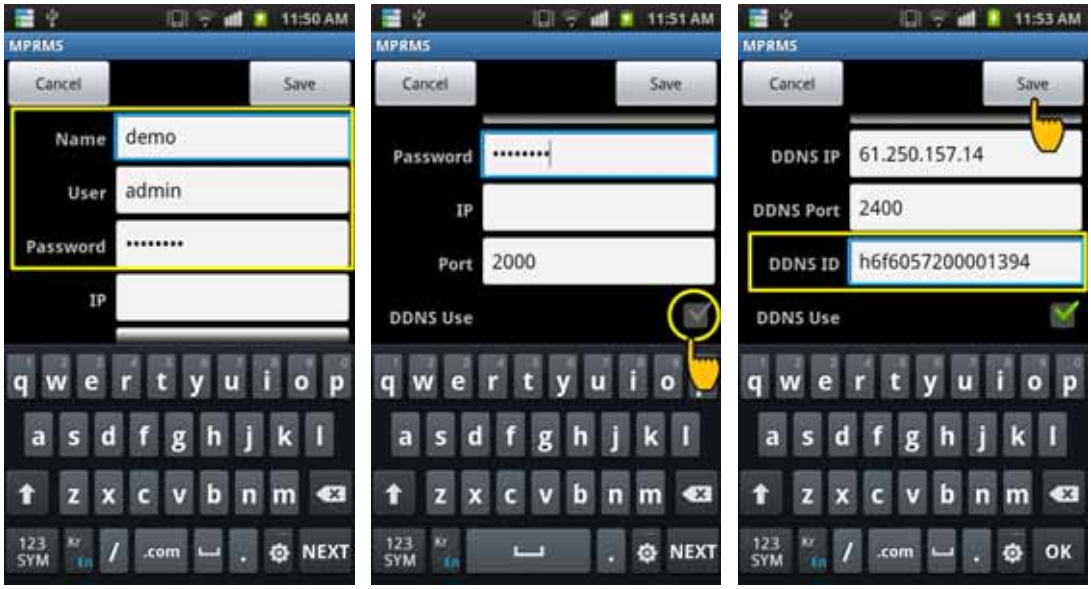
Register the product information for remote monitoring.

[1] Register



Select "Add" to start the registration.

[2] Enter the registration information



(1) (2) (3)

(1) Enter the name, Product ID(User) and Password.

Name : Enter any name you want.

User : Enter the "User ID" registered to the DVR.

Password : Enter the "Password" registered to the DVR.

(Note : "Menu" → "System" → "Password)

IP : This setting is only for static IP users.

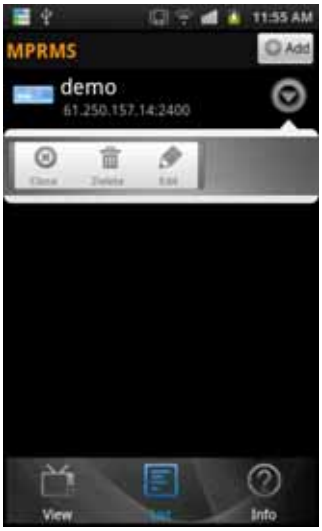
(2) After selecting "DDNS use", enter the "Password, IP and Port".

(Note: Dynamic IP user only)

(3) You can check the DDNS ID from the DVR menu: 'Menu' → "System" → System Information. Copy the 'WEBCODE' and enter it to DDNS ID and save it. (DDNS PORT is automatically changed as per the Webcode of DVR.)

Modify/Delete of Registered Information for Android

If you want to modify or delete the registered information, select the triangle-shaped icon.



Select to edit the registered info.

Select to delete the registered info.

Close TOOL menu (As a dual function, it ends the connection)

Remote connection for Android

Select the registered list for connection. Once you click the registered device, it shows the brief information like the 1st picture below. If you click the red-colored background, detailed info. appears like the 2nd picture. Click OK to execute the monitoring program.

(Select the list)

(Detailed info.)

Live view on Android

It shows the currently monitored images with real-time.

(1) Numeric Button : Press a numeric button to select a channel.

(2) 1 frame: When selected, it transmits a still image with the certain interval in case the video streaming is interrupted due to the network load

(3) Show OSD: Select to display the info. such as channel name, date, time and event, etc.

Main menu view on Android

On the bottom line of screen, there is a main menu. Select the menu to change the function

Go back to the previous step or close the monitoring program

Move to live mode (Channel change, 1 Frame and OSD display is available)

Go to PTZ mode

Go to PTZ preset mode

Go to search mode

Go to alarm mode

See the registered info.

PTZ control for Android

You can control the PTZ camera remotely.

(Select PTZ mode)

(PTZ mode screen)

(1) Go to PTZ mode

Select the PTZ connected channel and click the PTZ button.

(2) How to control PTZ

The PTZ camera moves to the selected direction.

Zoom in/ out

Focus adjustment

Touring operates according to the previously registered 'Preset' number

IRIS Open/ Close.

Call the PTZ menu

Auto Focus

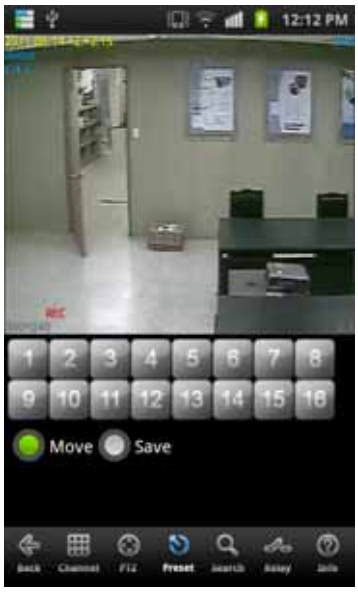
OK button for PTZ OSD menu

Cancel or the upper menu on PTZ OSD menu

PTZ Preset for Android

You can set the movement of PTZ camera previously and make the automatic PTZ movement.

(Select preset mode)



(Preset mode screen)

(1) How to go to PTZ mode
Select the PTZ connected channel and click the Preset button.

(2) How to operate Preset
- Move: If you select "Move" and press a number, then the camera moves.
- Save: If you select "Save" and press a number, then the current location is saved.

Search on Android

(1. Select the search mode)

(2. Select "Time Search")

(3. Select the date and time)

(1) Select the search mode

(2) Select "Time Search": Select "Time Search" to enter the search conditions.
(Note: Select "To Live" to return to the live mode during the search.)

(3) Enter the date and time: Select the date and time and click "Start Search" for search.

Fast reverse playback

Reverse playback

Pause

Playback

Fast playback

Relay Out for Android

Relay can be controlled remotely.

(1) Relay : Select On or Off

(2) Number : Select the relay number.

(3) Time : Select the duration time.

(4) Execute : Make the alarm output work

Information display option on Android

It shows the information of current connection.

(Select info)

(Display the connection info)

[Display Info]

Below is the example for an explanation.

- IP : 61.250.157.37 : 2000 Via DDNS ← Connected IP information.
- MODEL : 16CH(63,xxx xxx:0) ← 16Ch model
- Webcode : H6F6057200001394 ← Product ID(Webcode).
- F/W : 84, N/W:21 ← F/W and network version.
- VSTD : NTSC ← VIDEO standard.

End the connection for Android

(Select the back button)

(Select the Yes button)

There are several ways to finish the program.

1. If you click 'BACK', it asks like "Do you want to disconnect?" Then, you may click Yes.
2. Or you may just press close button on the phone.

3. Windows Mobile

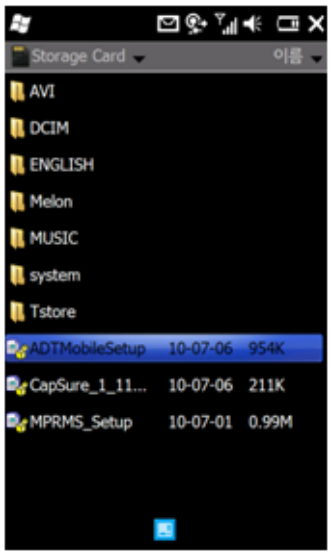
Install the program to Windows Mobile

Copy the program, MPRMS and save it to the mobile phone.

Execute the program for Windows Mobile

After save the program into the any folder, you can see the "MPRMS_Setup.cab" file as below picture.

☞ Please refer to the user's manual of mobile phone how to copy and save the application program.



Execute the "MPRMS_Setup.CAB" file then "MPRMS" icon will be created on the screen.

You can see the icon of "MPRMS".

Register the Product Information on Windows Mobile

For mobile viewing, you must register the network information of the DVR. As for the network setting of DVR, please refer to the user's manual of DVR.

[1] Register

Click the "Add DVR" to register a new DVR.

[2] Fill in the required information.

Enter info. like the picture above.

- NAME : Input any name you want.
- ID : Enter the DVR's login ID.
- PASS : Enter the DVR's login password.
- MODEL : Select the spec. of the model among H.264, MPEG-4 and MJPEG.

[3] Enter DDNS info.

DDNS setting is for a Dynamic IP user and should be entered as follows.

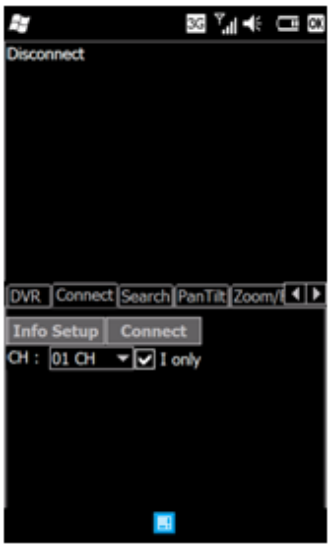
- Use DDNS : Select if you are a dynamic IP user.
- ADDR : Keep the default value of the DDNS server address (Default: www.adtcapscctv.net)
- PORT : The port value will be changed automatically. Keep the value as it is.
- SAVE : Save the info.

[4] Static IP User

- Use STATIC : Select if you are a static IP user.
- ADDR : Enter the static IP address registered in the DVR
- PORT : Enter PORT registered in the DVR. (Default : 3000)

Connect / Disconnect on Windows Mobile

[1] Connect

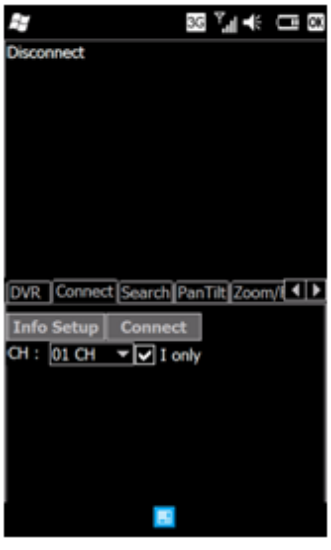


- Connect : Click the "Connect" to see the video.
- Info Setup : To change the DVR information, click the "Info Setup".
- 1 Only : When selected, it transmits a still image with the certain interval in case the video streaming is interrupted due to the network load.

[2] Disconnect

- Disconnect : If you want to disconnect, click it.

[3] Change the channel

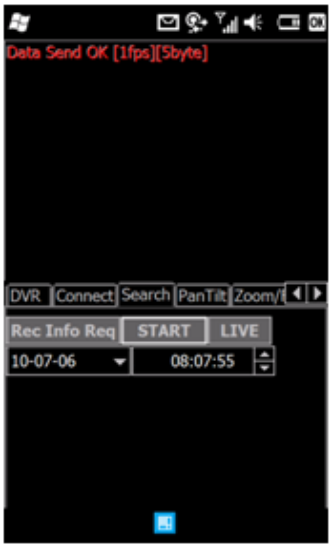


- CH : Click the "▼" to change the channel.

[4] Change the DVR

To connect the other DVR, click the "DVR" and select the registered DVR in the "DEVICE".
After selecting the DVR, click the "Connect" to see the video.

Search on Windows Mobile



To play the recorded image, select "Search" then click "Rec Info Req" to set the date and time for searching. After setting the data and time, click "START" to play.
(NOTE : The playback can be delayed depending on the network environment)

PTZ Control for Windows Mobile

Click "Pan Tilt" to control the PTZ camera. Press the direction button to move the camera position. [NOTE : In order to stop moving, user must press the "STOP" button.]

- Left : Move to the left
- Right : Move to the right.
- Up : Move to the upper.
- Down : Move to the down.
- STOP : Stop the movement.
- Normal/Invert : Change the direction.

Zoom /Focus

Click "Zoom/Focus" to control zoom In/Out and Focus In/Out.

Preset

You can save the camera location previously and then send the camera to move to a specified pre-position.

- P1~P16 : Select numbers to save
- MOVE / SET

◎ MOVE : After selecting a number among from P1~P16, press "SEND" to move the camera to the specified pre-position.

◎ SET : After selecting a number among from P1~P16, press "SEND" to set the location of camera.

Remote Alarm Control for Windows Mobile

Click "Alarm" to control alarm output.

- Select a number (1~16) : Relay out port. (Default : 1)
- Time : Set the duration time.
- ON/OFF : Press to start or stop.
  (Example : If the duration time is set with 5 sec., the alarm output lasts for 5 seconds when you set it ON.)

4. Internet Explorer Version 7 and later

The monitoring by the web browser is available as the web server is built in the DVR.

Initial Connection

If you have actual TCP IP address of the DVR you my input them directly into Internet Explorer or you may use the DDNS IP as indicated below.
Please check the network and port forwarding setup before starting the connection.

[1] Visit http://www.ddnsip.net to register your DVR.

① Enter the DVR's web code.
You can find the web code as below.
Call the Menu → System → Information → Web code

② You can enter any name you want for your domain name.

③ Click "Register".
Also you can delete your registered DVR after entering the web code and domain name.

☞ Note

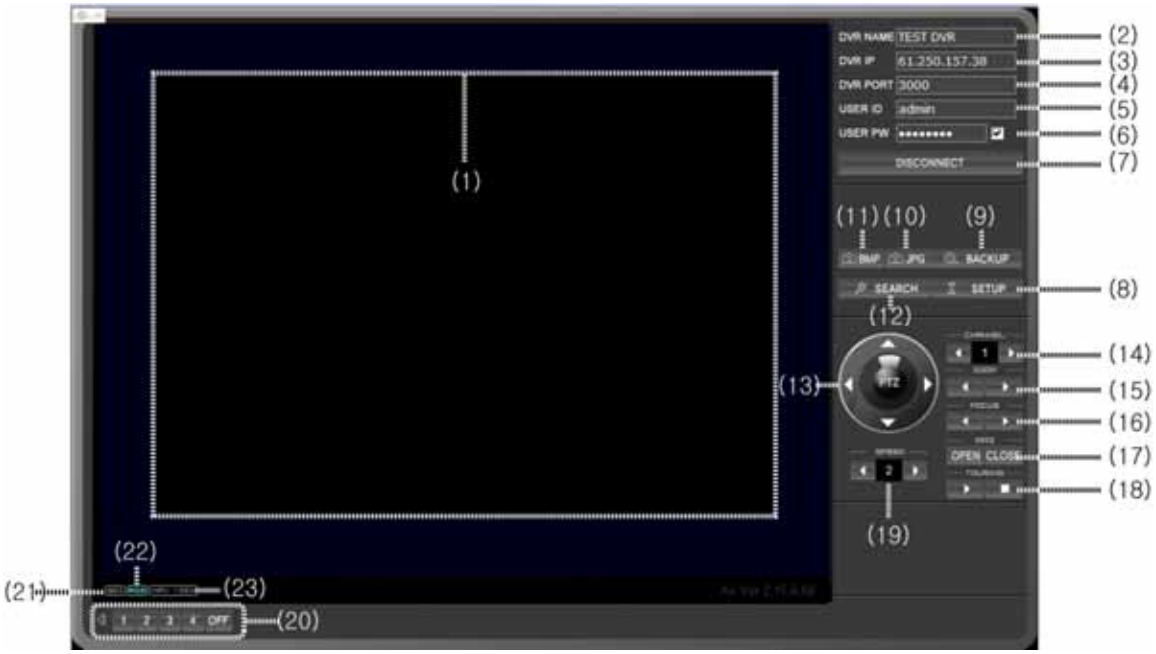
It takes around 10 to 15 minutes to get the service after the registration. So, please try the connection 10 to 15 minutes later.

[2] How to connect

Run the web browser on PC screen and enter http://soon.ddnsip.net to connect.

In the first connection, install "ActiveX". If the ActiveX is installed, then DVR IP and DVR Port is set as a default value by itself. So if you enter the user ID and password, you can connect to the DVR.

Display Configuration



(1) Display area : Whenever you click, the selected channel or split screen is displayed.

(2) DVR Name: Enter any name you want. When you reconnect the DVR in the same pc, the name is saved.)

(3) DVR IP : The IP address registered to the DVR automatically is displayed.

(4) DVR PORT : The port registered to the DVR is automatically displayed.

(5) USER ID : Enter DVR's user ID

(6) USER PW : Enter DVR's password

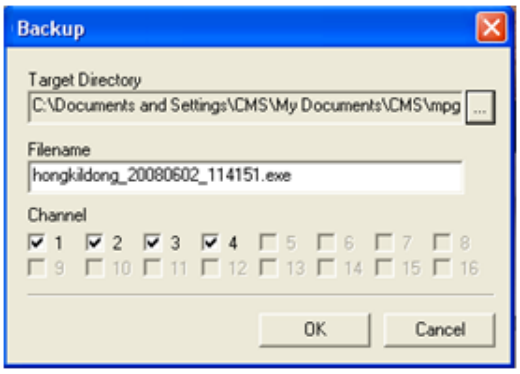
(Note : The Password is saved when you reconnect the DVR in the same pc.)

(7) CONNECT / DISCONNECT

(8) SETUP : You can set the DVR remotely.

(The remote setup is the same with the local setup.)

(9) BACKUP : It's available to back up the live or playback video.



- Directory : Selects the folder to save.
- File name : Enter the file name to save.

• Channel: Select the channel to back up.

(10) JPG : Capture the current picture with jpg file and show the saved folder with popup message.

(11) BMP : Capture the current picture with BMP file and show the saved folder with popup message.

(12) SEARCH : You can search the recorded video remotely. The remote search is the same with the local search.

(13) Direction key : You can use it when controlling the PTZ.

(14) CHANNEL : Select the channel connected to a PTZ camera.

(15) ZOOM : Adjust the zoom

(16) FOCUS : Adjust the focus

(17) IRIS : Control the IRIS

(18) TOURING : Select On or Off for PTZ touring

(19) SPEED : Control the PTZ speed

(20) AUDIO : Select the audio channel to listen

(21) GDI : Display the video with GDI type (It increases the system load and it's recommended for the PC built-in the VGA card of high spec.

(22) RGB : It displays the pictures with the graphic card accelerator. It can decrease the system load but the picture quality is varied depending on the graphic card.

(23) MAX VIEW : Full screen function (Enter "ESC" to go back.)

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Limited 2 Year Warranty

This warranty gives the original purchaser specific legal rights and you may also have other rights, which may vary from state to state. If our products do not function because of any defect in material or workmanship, we will repair it for free for 1 year on parts and labor from the date of original purchase. This warranty does not cover modification, abuse, incidental or consequential damages unless the state of owner's residence specially prohibits limitations on incidental or consequential damages.

How to Obtain Factory Service

- Original purchaser must fill out the warranty card and mail it to the factory with the model number, serial number and the date of purchase.
- We will repair or replace, and return the system to the owner under this limited warranty.
- Please pack the system carefully and securely using the original packing materials, and send it prepaid and insured to: **16000 Carmenita Rd, Cerritos, CA 90703**.
- Please include a check for $25.00 to cover the cost of return postage and handling. If the system is returned within the warranty period, please include a proof of purchase. If the system is out of warranty, you will receive an estimate of the repair cost for your approval before repair work will be started.

MEMO